HYDRODEC NORTH AMERICA, LLC
DEMONSTRATION TEST REPORT

March 19, 2010

Hydrodec North America, LLC
2021 Steinway Blvd. SE
Canton, OH 44707
PH (330) 454-8202
Fax (330) 454-8870

March 19, 2010

Matt Hale
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
Potomac Yards North
2733 S. Crystal Drive
RM # N-6331
Arlington, VA. 22202

Dear Mr. Hale,

This letter is to certify that Hydrodec North America, LLC carried out a demonstration test in accordance with the approved test plan and the results of all determinations are submitted in this report. The demonstration test was carried out under the PCB Disposal by Non-Thermal Alternative Methods.

Sincerely,

Brian D. Klink – General Manager
Hydrodec North America, LLC

Volume 1 of 1

DEMONSTRATION TEST REPORT

PCB DISPOSAL BY NON-THERMAL ALTERNATIVE METHODS
Hydrodec North America LLC
2021 Steinway Boulevard
Canton, Ohio 44707

Test Date: October 19 through October 23, 2009
Submission Date: March 19, 2010
Submission Number: 001 (one)

Submitted by:

Hydrodec North America, LLC
2021 Steinway Boulevard
Canton, Ohio 44721

Brian Klink, General Manager
(330) 454-8202

Submitted to:

Matt Hale - Director
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
Potomac Yards North
2733 S. Crystal Drive
Rm # N-6331
Arlington, VA 22202

TABLE OF CONTENTS

APPENDICES

SECTION 1 – SUMMARY

Hydrodec North America, LLC has designed a process that effectively treats transformer oils contaminated with polychlorinated biphenyls (PCBs). Hydrodec uses a hydrogenation process that chemically removes the chlorines from the PCB's rendering them harmless. The system (Figure 2-1) is automated and consists of bulk shipment unloading, PCB storage tanks, a feedstock tank, heaters, reactors, heat exchangers, oil water and gas separation, and a recycle gas recovery system. Hydrodec currently operates a similar facility in Young, Australia. Hydrodec intends to use this technology at the facility located in Canton, Ohio as well as a proposed facility located in Laurel, Mississippi. It is Hydrodec's understanding that results from the demonstration carried out at the Canton, Ohio facility will apply to any future sites in the United States.

A demonstration test was conducted by Hydrodec at the Canton, Ohio facility from October 19th through October 23, 2009 with overview from the USEPA. Winston Lue, Chemical Engineer, and Molly Finn, Environmental Engineer, both with the USEPA, were onsite for the entirety of the demonstration.

Hydrodec originally proposed three 8-hour test runs, but upon further discussion it was determined that Hydrodec would conduct four 6-hour tests. Sampling was then limited to those times when PCB oil was actually being processed and for a duration of 1 hour after completion to make sure all PCB contaminated oil was successfully ran through the reactor.

The goal of successfully treating PCB contaminated transformer oil was met and the process performed to Hydrodec's expectations.

Prior to and during the Hydrodec demonstration test there were a number of project modifications. These were agreed to by Winston Lue and Molly Finn as well as Hydrodec. The modifications are described below:

1. Number of Runs/Samples - Hydrodec originally proposed three 8-hour test runs. Upon further discussion it was determined that Hydrodec would conduct four 6-hour tests. Sampling was then limited to those times when PCB oil was actually being processed.

2. Feedstock PCB Content – The PCB content of the feedstock being used for the test was anticipated to be less than 2,000 ppm. Preliminary results from samples taken during the demonstration indicate that some samples contained PCBs at levels exceeding 2,000 ppm.

3. Scavenger – Scavenger concentrations and feed rates were increased throughout the duration of the test.

4. Re-samples – Due to potential sample cross-contamination, composite samples for Runs 1 and 2 were re-composited.

5. Reactor Shut-down – On October 21, 2009 the reactor was shut-down due to an equipment failure and the reactor (train) was immediately shut down for repairs.

6. Stage 2 – Hydrodec originally proposed to run the oil through the reactor and into our second stage water wash. It was later determined that the oil would be directed into a holding tank prior to the washing stage. This oil was then tested for PCB content. As a result, no wastewater was generated.

Table 1-1 Summary of Test Results and Operational Data

Demonstration Test Results Summary for Batch Chemical Dechlorination Process

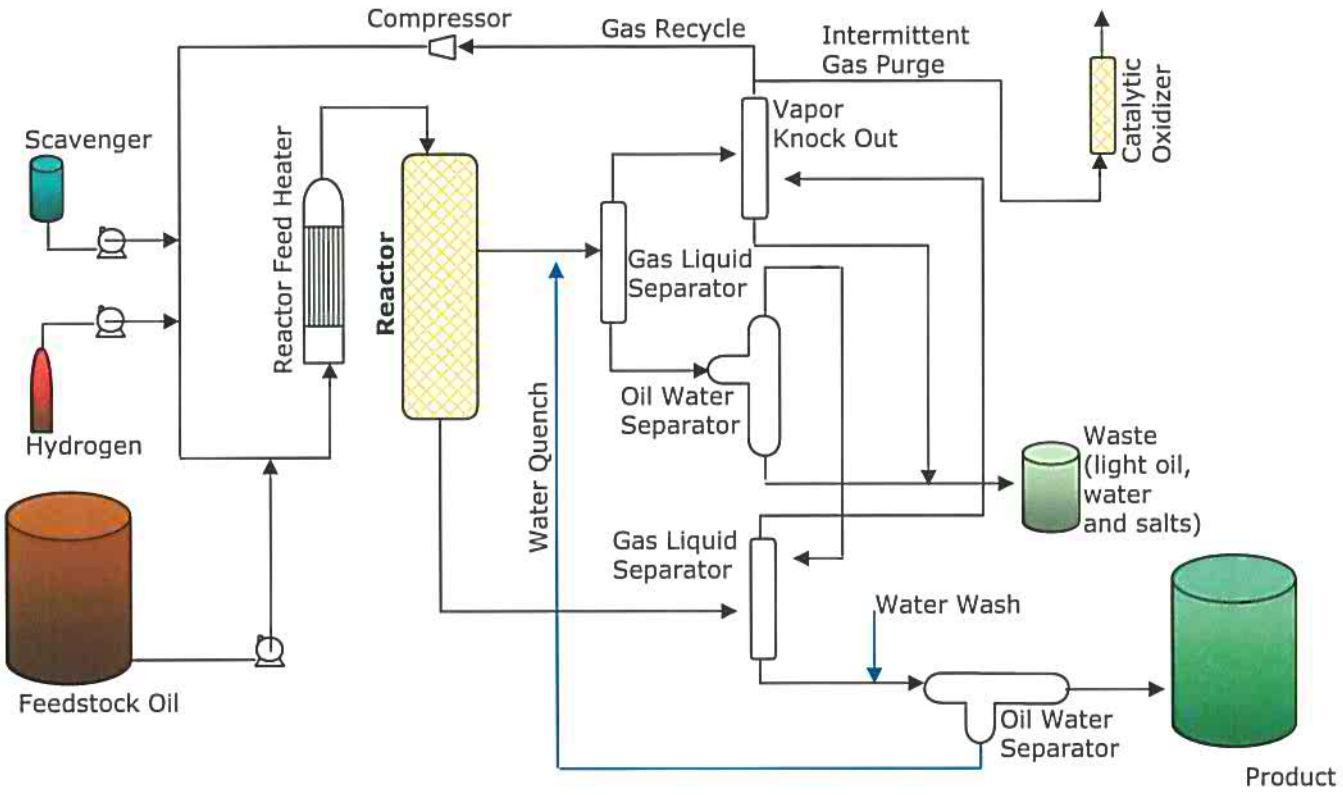
	Test 1	Test 2	Test 3	Test 4
Date	10-20-2009	10-21-2009	10-22-2009	10-23-2009
Time Test Began	08:50	08:40	08:40	09:05
Time Test Ended	14:30	11:32	14:40	14:30
Operating Parameters:				
Feed Rate (kg/h)	650	651	650	651
Batch Volumes Waste Feed (kg)	3,900	1,953	3,900	3,906
Batch Volumes Waste Feed (gal)	1,170	588	1,170	1,176
Batch Volumes Waste Feed (lbs)	8,588	4,316	8,588	8,632
PCB Concentration in Feed (g/kg)	1,892	1,921	2,074	1,952
Reaction Start Time (24 – clock)	08:50	08:40	08:40	09:05
Reaction End Time (24 – clock)	14:30	11:32	14:40	14:30
Final Batch Size (kg)	4,550	2,604	4,550	4,557
Final Batch Size (gal)	1,365	784	1,365	1,371
Average Reactor Temperature (°C)	305	305	305	305
Average Reactor Temperature (°F)	581	581	581	581
Average Reactor Pressure (kPa)	3,546	3,512	3,524	3,512
Average Reactor Pressure (PSI)	514	509	511	509
Average Scavenger Feed Rate (kg/hr)	5.4	3.6	7.1	7.4
Set Point for Scavenger (ppm)	100	100	100	100
Sampling Analysis Results:				
Final PCB Concentration of Feedstock (ug/g/peak)	<1	<1	<1	<1
PCB Concentration of Wastewater (mg/L/peak)	None Generated	None Generated	None Generated	None Generated
Dioxin/Furan Analysis Results:				
Initial Dioxin/Furan (ng/g)	ND	ND	ND	ND
Final Dioxin/Furan (ng/g)	ND	ND	ND	ND

SECTION 2 – PROCESS OPERATION

2.1 General Description

The Hydrodec technology was developed specifically for the purpose of refining used oils and organic chemicals. It is as near to a closed loop near zero emission process for the complete treatment of PCBs as is available in the world at this point in time. The Canton facility consists of four identical reactor trains. The following provides a description of the Hydrodec process as it flows through one of these trains. Figure 2-1 provides a Process Flow diagram

Figure 2-1



2.2 Operation during the Test

Hydrodec proposed, and the EPA agreed, that the use one of four identical reactor trains for the demonstration would be sufficient.

- PCB contaminated oil averaging 1,960 ppm was used for the test and fed to the reactor at a rate of 650 kg/h.
- The reactor was maintained at an average temperature of 581°F and an average pressure of 511 PSI throughout the demonstration.

- There were approximately 4,104 gallons of feed used for the demonstration and at the completion of each day, non-PCB contaminated oil was feed to the reactor for an additional hour resulting in approximately 4,885 gallons total.
- At the end of each demonstration the product was tested in-house to determine that PCBs were not detectable prior to transferring the clean oil back to Hydrodec's feed oil tanks.

Operating parameters remained constant throughout the process; see Appendix I for a list of process data.

2.3 Deviations from Test Plan

Prior to and during the Hydrodec demonstration test there were a number of project modifications. These were agreed to by Winston Lue and Molly Finn as well as Hydrodec, see Appendix I. The modifications are described below:

1. Number of Runs/Samples - Hydrodec originally proposed three 8-hour test runs. Upon further discussion it was determined that Hydrodec would conduct four 6-hour tests. Sampling was then limited to those times when PCB oil was actually being processed.

2. Feedstock PCB Content – The PCB content of the feedstock being used for the test was anticipated to be <2,000 ppm. Preliminary results from samples taken during the demonstration indicate that some samples contained PCBs at levels exceeding 2,000 ppm.

3. Scavenger - Scavenger concentrations and feed rates were increased throughout the duration of the test.

4. Re-samples - Due to potential sample cross-contamination, composite samples for Runs 1 and 2 were re-composited.

5. Reactor Shut-down – On October 21, 2009 the reactor was shut-down due to an equipment failure and the reactor (train) was immediately shut down for repairs.

6. Stage 2 – Hydrodec originally proposed to run the oil through the reactor and into our second stage water wash. It was later determined that the oil would be directed into a holding tank prior to the washing stage. This oil was then tested for PCB content. As a result, no wastewater was generated.

SECTION 3 – SAMPLING AND MONITORING PROCEDURES

3.1 SAMPLING PROCEDURES

The samples were taken in accordance with EPA methodology for representative sampling. The QAPP provides a detailed discussion on the sampling procedures for the Hydrodec process.

Samples were collected hourly from two locations. The first sample port was the feedstock sample port, which was installed between the feed oil hose and the feed oil pump. The second sample location is the reactor sample port, which is located on the back end of the reactor. All samples were taken directly into 12 oz. HDPE containers. The samples were then analyzed using approved ASTM methodology to obtain the results.

Oil discharged from the reactor outlet and into Hydrodec's "Emergency" tank. Oil in the "Emergency" tank was then sampled and once verified that no PCBs were present, the oil was then transferred back to a Hydrodec feedstock tank. Since the processed oil was sent directly into a tank immediately after process, no waste water was generated and analysis was not required. It was also not necessary to sample any filters.

3.2 Process Samples

The sampling procedures for the Demonstration Test are summarized in the following table:

TABLE 3-1
Summary of Sampling Procedures

Analyte	Method	Matrix	Sample Volume	Holding time	Preservation
PCBs	ASTM 4059	Oil	12 oz. plastic (HDPE)	7 days	N/A
PCBs	EPA 8082	Oil	4 oz. glass jars	4 days	N/A

PCB oil was sampled just before the feed pump to the reactor prior to being fed into the process. Samples of the treated oil were taken from the reactor sampling port.

Samples were collected hourly from the feedstock sample port and the reactor sample port directly into 12 oz. HDPE containers. Composite samples for the first and second day were collected by putting hourly samples into a single container. A sample was then taken from this container and analyzed. On the third and fourth day of the demonstration, samples were composited by the Hydrodec laboratory personnel from each hourly sample. Chain-of-custody forms were established and acted as the transmittal form from the sampling personnel to the laboratory personnel for all in-house and outside laboratories. Samples were manually transported to the laboratory in sample coolers used solely for demonstration purposes.

There were two deviations from the projected sampling given prior to the demonstration was the size and type of the sampling bottles, 4 oz. Nalgene to 12 oz. HDPE. The second deviation was the sampling routine that was changed due to the change in runs.

3.3 Monitoring Procedures

The following operating parameters were monitored:

Location	Parameter	Typical Range
Reactor Train	Flow Rate	500-800kg/kr
Reactor Train	Reactor Temperature	280-330 DegC
Reactor Train	System Pressures	3400-3500 kpa
Reactor Train	Recycle Gas Flow	17.5-30 kg/hr
Reactor Train	Scavenger Flow	60-100 kg/hr
Reactor Train	Quench/Wastewater	60-100 kg/hr

SECTION 4 – ANALYTICAL PROCEDURES

4.1 Analytical Procedures

Hydrodec created test feedstock by combining PCB oil of greater than 600,000 ppm PCB oil with non-PCB oil in a temporary oil tank. The oil from this tank (Arochlor 1260) was then used to feed the reactor.

All samples were tested using either approved ASTM and EPA standards during the test. The analysis performed on samples is given below.

Testing was completed by both Hydrodec, see Appendix D and SD Myers, see Appendix E, using the ASTM D4059 method. For this test, the specimen is diluted with a suitable solvent. The resulting solution is treated by a procedure to remove interfering substances after which a small portion of the resulting solution is injected into a gas chromatographic column. The components are separated as they pass through the column with carrier gas and their presence in the effluent is measured by an electron capture detector and recorded as a chromatogram. The test method is made quantitative by comparing the sample chromatogram with a chromatogram of a known quantity of one or more standard Aroclors, obtained under the same analytical conditions.

Additional samples were also obtained and submitted to Test America, see Appendix F and Battelle (USEPA), see Appendix C. These composite samples were analyzed using EPA Method 8082. This method uses approximately 50 mg of oil that is diluted in hexane, spiked with surrogate internal standards, and an aliquot removed and applied to a florisil clean-up column. Based on information about the expected concentrations in the feed samples, those extracts are diluted prior to analysis. The extracts are spiked with internal standards, and then submitted for analysis. Extracts are then analyzed using gas chromatography/electron capture detection. Sample data were then quantified by the method of internal standards, using the internal standards compounds. Data are then reported on mg/kg basis. Following the initial analysis, the post-treatment samples were analyzed a second time using a lower dilution factor in order to confirm that PCB Aroclors were not detected at a level greater than or equal to 1 mg/kg oil.

A complete summary of analytical can also be found in Appendix B, which shows results from Hydrodec, Battelle, S.D. Myers and Test America.

SECTION 5 – TEST RESULTS

5.1 Test Results

Analytical results for feed oil ranged in PCB's from 1500ppm to over 2,000ppm during the test as you will see in Appendix B through F. Processed Oil was also analyzed and all samples came back as a non-detect for PCB's.

There were four separate laboratories used to analyze oil samples. These laboratories were Hydrodec, SD Myers, Test America and Battelle (USEPA).

Dioxins and Furans were also analyzed by Test America and the results all came back as a non-detect.

With the exceptions of the deviations stated in Section 2.3, the demonstration of the process and system results was successful.

5.2 Anomalies

Due to possible cross-contamination, samples were re-composited for runs 1 and 2 of treated oil. All individual samples for these runs came back with a non-detect from the Hydrodec laboratory, however the composite samples did not. A representative sample was pulled from each hourly sample and re-composited under the supervision of the USEPA and following quality controls.

SECTION 6 – QUALITY ASSURANCE SUMMARY

6.1 Data Generation and Acquisition

The Quality Assurance Plan that was developed was used to produce reliable data that would be generated throughout the demonstration test by:

- Ensuring the validity and integrity of the data;
- Ensuring and providing mechanisms for ongoing control of data quality
- Evaluating data quality in terms of PARCCS; and
- Providing usable, quantitative data for analysis, interpretation, and decision making.

6.2 Data Verification/Usability

The data verification was a process of evaluating the completeness, correctness, and contractual compliance of a data set against the method standard, SOP, or contract requirements. Data verification was performed internally by the analytical group and the laboratory generating the data.

In order to perform the data verification, the reported data was supported by complete data packages which include sample receipt and tracking information, COC records, tabulated data summary forms, and analytical data for all samples standards.

Additionally, one set of two blind oil samples were received from ERA as requested by the USEPA. These blind samples were then analyzed by the Hydrodec laboratory to determine Aroclor 1260 content. A summary of these results are provided below. A copy of the lab results of this QC sampling event are provided in Appendix K.

Sample Description	Sample ID	Hydrodec Lab Result
Aroclor 1260 in Transformer Oil Mix #1	1026-09-03.1	2 ppm
Aroclor 1260 in Transformer Oil Mix #2	1026-09-03.2	2,362 ppm

6.3 Results

All quality objectives were met as well as accuracy objectives, quality control samples, performance audit samples, and system audits. Audits of the operation during demonstration, sampling and analysis were completed by the EHS Coordinator and the Site Manager and documented for quality and recordkeeping purposes.

SECTION 7 - VISITS AND AUDITS

7.1 Visits and Audits

During the demonstration that was held at Hydrodec North America, LLC there were only two visitors and they were both from the EPA.

Winston Lue, Chemical Engineer
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460
(703) 305-1617

Molly Finn, Environmental Engineer
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460
(703) 347-8785

Both visitors to Hydrodec from the EPA were onsite for the duration of the testing and monitored the process and sampling techniques being used. Samples were split and given to these contacts for analysis at a laboratory unknown to Hydrodec.

Hydrodec's sampling locations, methods and handling were all observed by both EPA contacts during each test and no discrepancies or issues were found during the demonstration.

SECTION 8 - CLOSURE

8.1 Closure

All onsite oil was processed during the demonstration test. As a result, no PCB oil was sent offsite for disposal. However, manifests have been attached for the disposal of PPE, hoses, containers and tank rinsate, see Appendix J. All manifested items sent offsite were incinerated. No material was land filled.

SECTION 9 - WASTE HANDLING AND DISPOSAL

9.1 Waste Handling and Disposal

All waste that was generated during the PCB Demonstration was properly disposed of by Hydrodec in accordance with TSCA and RCRA regulations. All materials have been incinerated by approved facilities in accordance to regulation. Manifests have been attached to this report to show documentation of disposal, see Appendix J.

Appendix A

Quality Assurance Report

Quality Assurance Report for PCB Demonstration with USEPA

This report is being completed to verify that the Quality Procedures and Controls that were developed and put into place for the PCB Demonstration were completed in their entirety and accurately.

A Quality Assurance Procedure was developed for the sole purpose of producing reliable data that could be generated throughout the demonstration by ensuring the validity and integrity of the data, ensuring and providing mechanisms for ongoing control of data quality, evaluating data quality and providing usable, quantitative data for analysis, interpretation and decision making.

The following items were implemented into the demonstration and examples of how the applicant adhered to them.

1.1 Sampling Process Design

Laboratory test parameters for the sampling program included analysis of PCBs in accordance with ASTM D4059.

Both the PCB contaminated transformer oil and treated oil were tested using ASTM D4059 approved methods with documented results as were required.

1.2 Analytical Methods Requirements

In order to preserve the integrity of samples both before and during analysis, specific analytical methods and requirements for those methods were followed.

Samples were collected in 12 oz. HDPE bottles by the EHS Coordinator in accordance with S.D. Myers standard operating procedures. All samples were in the control of the EHS Coordinator from sampling to delivery to S.D. Myers.

1.3 Sample Handling and Custody Requirements

Proper sample handling and custody procedures are crucial to ensuring the quality and validity of data obtained through plant and laboratory analyses. The possession and handling of samples was documented from the time of collection to the delivery to the laboratory.

Samples were drawn by the EHS Coordinator and an Operator every hour during the demonstration. These samples were then taking to the Hydrodec laboratory and segregated into "Feed Samples" and "Clean Samples" until they were delivered to S.D. Myers by the EHS Coordinator. Samples were in the sole custody of Hydrodec until they were signed over to S.D. Myers. Completed chain-of-custody forms have been attached to Demonstration Report.

1.4 Sample Collection Documentation

Sample handling procedures included process documentation, chain-of-custody documentation, sample shipment, and laboratory tracking information.

Samples were taking according to ASTM D4059 requirements and handled only by the EHS Coordinator until a chain-of-custody was signed over to S.D. Myers for ownership of the samples.

1.5 Sample Log

A sample log was provided in the Demonstration Test Plan and was used to document sample details such as time and sample number.

The sample log was completed on both sides of the process and was signed by the EHS Coordinator or the Operator for all samples taken and when.

1.6 Identification System

Each sample collected during the demonstration was given a unique identification code. Each sample identification consisted of the *Project Identification Code (D), the Run Number 1-4, Location Code (FE or CO), and Time Code 1-12.*

All samples were made up with the same identification system and an example is D-3-FE-05, which would be *Demonstration – Day 3 – Feed Oil – Fifth Hour.* Each sample was individually cataloged by the EHS Coordinator and verified by the Site Manager.

1.7 Sample Packaging and Shipping

Samples were packaged and transported in a manner that maintained the integrity of the sample and permitted the analysis to be performed within the prescribed holding time.

Prior to shipment, each sample was checked for the proper labeling and identification codes. Samples were picked up daily by S.D. Myers so that holding times were conserved.

1.8 Quality Control Requirements

The Quality Control requirements ensure that the data collected is of the highest standard feasible as appropriate for the intended application. The responsibility for the calibration of laboratory equipment rested solely with S.D. Myers.

Documented and approved procedures were used for calibrating measuring and testing equipment. Procedures published by the USEPA and ASTM were adopted for sampling and analysis purposes.

In conclusion, all quality standards set forth by Hydrodec and the USEPA prior to the demonstration were met as well as the intended precision and accuracy required for this test.

Joseph A. DeVirgilio, EH&S Coordinator

March 5, 2010

Date

Appendix B

Summary of Analytical

DEMONSTRATION TEST SAMPLING SCHEDULE

RUN 1 **October 20, 2009**

SAMPLE ID	TIME	Hydrodec	SD Myers	Test America	USEPA
D-1-FE-01	8:50	1961	2023	N/A	N/A
D-1-FE-02	9:30	1888	2020	N/A	N/A
D-1-FE-03	10:30	1935	2073	N/A	N/A
D-1-FE-04	11:30	1894	2143	N/A	N/A
D-1-FE-05	12:30	1922	2068	N/A	N/A
D-1-FE-06	13:30	1996	2095	N/A	N/A
D-1-FE-07	14:30	1861	2126	N/A	N/A
D-1-CO-01	9:05	<1	Non-Detect	N/A	N/A
D-1-CO-02	9:30	<1	Non-Detect	N/A	N/A
D-1-CO-03	10:35	<1	Non-Detect	N/A	N/A
D-1-CO-04	11:30	<1	Non-Detect	N/A	N/A
D-1-CO-05	12:30	<1	Non-Detect	N/A	N/A
D-1-CO-06	13:35	<1	Non-Detect	N/A	N/A
D-1-CO-07	14:35	<1	Non-Detect	N/A	N/A
D-1-CO-08	15:30	<1	Non-Detect	N/A	N/A
D-1-CO-09	16:30	<1	Non-Detect	N/A	N/A
D-1-FE-Comp*		2046	N/A	1500	N/A
D-1-CO-Comp*		1.9	N/A	Non-Detect	< 0.77
D-1-FE-CompR*		2046	N/A	N/A	2215.26
D-1-CO-CompR*		<1	N/A	Non-Detect	< 0.79

N/A = Not Applicable Since Reporting Lab Did Not Perform Analysis For Recorded Sample Results are reported in mg/kg

FE - Feedstock Oil (PCB) CO - Clean Oil (Processed)

Composite Sampling Make-up*

D-1-FE-CompR*	D-1-CO-CompR*
D-1-FE-01	D-1-CO-02
D-1-FE-02	D-1-CO-03
D-1-FE-03	D-1-CO-04
D-1-FE-04	D-1-CO-05
D-1-FE-05	D-1-CO-06
D-1-FE-06	D-1-CO-07
D-1-FE-07	

RUN 2 **October 21, 2009**

SAMPLE ID	TIME	Hydrodec	SD Myers	Test America	USEPA
D-2-FE-01	8:40	1828	1978	N/A	N/A
D-2-FE-02	9:30	1859	1978	N/A	N/A
D-2-FE-03	10:35	1933	2061	N/A	N/A
D-2-FE-04	11:30	1834	1988	N/A	N/A
D-2-FE-05	N/A	N/A	N/A	N/A	N/A
D-2-FE-06	N/A	N/A	N/A	N/A	N/A
D-2-FE-07	N/A	N/A	N/A	N/A	N/A
D-2-CO-01	8:45	<1	Non-Detect	N/A	N/A
D-2-CO-02	9:32	<1	Non-Detect	N/A	N/A
D-2-CO-03	10:40	<1	Non-Detect	N/A	N/A
D-2-CO-04	11:32	<1	Non-Detect	N/A	N/A
D-2-CO-05	N/A	N/A	N/A	N/A	N/A
D-2-CO-06	N/A	N/A	N/A	N/A	N/A
D-2-CO-07	N/A	N/A	N/A	N/A	N/A
D-2-CO-08	N/A	N/A	N/A	N/A	N/A
D-2-CO-09	N/A	N/A	N/A	N/A	N/A
D-2-FE-Comp*		N/A	N/A	1600	N/A
D-2-CO-Comp*		1.6	N/A	Non-Detect	< 0.84
D-2-FE-CompR*		1957	N/A	N/A	2242.42
D-2-CO-CompR*		<1	N/A	Non-Detect	< 0.80

N/A = Not Applicable Since Reporting Lab Did Not Perform Analysis For Recorded Sample Results are reported in mg/kg

FE - Feedstock Oil (PCB) CO - Clean Oil (Processed)

Composite Sampling Make-up*

D-2-FE-CompR*	D-2-CO-CompR*
D-2-FE-01	D-1-CO-02
D-2-FE-02	D-1-CO-03
D-2-FE-03	D-1-CO-04
D-2-FE-04	

RUN 3 **October 22, 2009**

SAMPLE ID	TIME	Hydrodec	SD Myers	Test America	USEPA
D-3-FE-01	8:40	1907	1925	N/A	N/A
D-3-FE-02	9:35	1819	2088	N/A	N/A
D-3-FE-03	10:35	1888	2148	N/A	N/A
D-3-FE-04	11:35	1992	2129	N/A	N/A
D-3-FE-05	12:40	2033	2048	N/A	N/A
D-3-FE-06	1:40	2047	2137	N/A	N/A
D-3-FE-07	2:35	<1	Non-Detect	N/A	N/A
D-3-CO-01	8:42	<1	Non-Detect	N/A	N/A
D-3-CO-02	9:38	<1	Non-Detect	N/A	N/A
D-3-CO-03	10:35	<1	Non-Detect	N/A	N/A
D-3-CO-04	11:35	<1	Non-Detect	N/A	N/A
D-3-CO-05	12:40	<1	Non-Detect	N/A	N/A
D-3-CO-06	1:40	<1	Non-Detect	N/A	N/A
D-3-CO-07	2:35	<1	Non-Detect	N/A	N/A
D-3-CO-08	3:30	<1	Non-Detect	N/A	N/A
D-3-CO-09	4:40	<1	Non-Detect	N/A	N/A
D-3-FE-Comp*		2095	N/A	1700	1875.08
D-3-CO-Comp*		<1	N/A	Non-Detect	<0.75

N/A = Not Applicable Since Reporting Lab Did Not Perform Analysis For Recorded Sample Results are reported in mg/kg

FE - Feedstock Oil (PCB) CO - Clean Oil (Processed)

Composite Sampling Make-up*

D-3-FE-Comp*	D-3-CO-Comp*
D-3-FE-01	D-3-CO-02
D-3-FE-02	D-3-CO-03
D-3-FE-03	D-3-CO-04
D-3-FE-04	D-3-CO-05
D-3-FE-05	D-3-CO-06
D-3-FE-06	D-3-CO-07
D-3-FE-07	

RUN 4 **October 23, 2009**

SAMPLE ID	TIME	Hydrodec	SD Myers	Test America	USEPA
D-4-FE-01	9:05	1951	1951	N/A	N/A
D-4-FE-02	9:45	1969	1964	N/A	N/A
D-4-FE-03	10:30	2005	2014	N/A	N/A
D-4-FE-04	11:30	1976	1986	N/A	N/A
D-4-FE-05	12:30	1963	1972	N/A	N/A
D-4-FE-06	1:30	1935	1982	N/A	N/A
D-4-FE-07	2:30	1880	1886	N/A	N/A
D-4-FE-08	3:30	N/A	1944	N/A	N/A
D-4-FE-09	4:30	N/A	1961	N/A	N/A
D-4-FE-10	5:30	N/A	22	N/A	N/A
D-4-FE-11	6:30	N/A	Non-Detect	N/A	N/A
D-4-CO-01	9:05	<1	Non-Detect	N/A	N/A
D-4-CO-02	9:45	<1	Non-Detect	N/A	N/A
D-4-CO-03	10:30	<1	Non-Detect	N/A	N/A
D-4-CO-04	11:30	<1	Non-Detect	N/A	N/A
D-4-CO-05	12:30	<1	Non-Detect	N/A	N/A
D-4-CO-06	1:30	<1	Non-Detect	N/A	N/A
D-4-CO-07	2:30	<1	Non-Detect	N/A	N/A
D-4-CO-08	3:30	<1	Non-Detect	N/A	N/A
D-4-CO-09	4:30	<1	Non-Detect	N/A	N/A
D-4-CO-10	5:30	<1	Non-Detect	N/A	N/A
D-4-CO-11	6:30	<1	Non-Detect	N/A	N/A
D-4-FE-Comp*		1952	N/A	1800	2219.96
D-4-CO-Comp*		<1	N/A	Non-Detect	< 0.87
Trip Blank		N/A	N/A	Non-Detect	<3.33
C001B - Blank		N/A	N/A	Non-Detect	N/A

N/A = Not Applicable Since Reporting Lab Did Not Perform Analysis For Recorded Sample Results are reported in mg/kg

FE - Feedstock Oil (PCB) CO - Clean Oil (Processed)

Composite Sampling Make-up*

D-4-FE-Comp*	D-4-CO-Comp*
D-4-FE-01	D-4-CO-02
D-4-FE-02	D-4-CO-03
D-4-FE-03	D-4-CO-04
D-4-FE-04	D-4-CO-05
D-4-FE-05	D-4-CO-06
D-4-FE-06	D-4-CO-07
D-4-FE-07	

Appendix C

USEPA Analytical Data

January 4, 2010

Ms. Sineta Wooten
Project Officer
Program Assessment and Outreach Branch
U.S. Environmental Protection Agency
1301 Constitution Ave., Room 4355-W
Washington, D.C. 20004

Contract No. EP-W-09-024
Work Assignment No. 0-05
Hydrodec PCB Disposal Demonstration Sample Results

Dear Ms. Wooten:

Enclosed please find a summary of the analytical results for the Hydrodec PCB Disposal Demonstration that occurred the week of October 19, as well as a summary of the Quality Assurance/Quality Control (QA/QC) results and the final analytical data tables. The tables containing the final analytical results were created from a direct transfer of the authorized LIMS data to an Excel workbook. If additional information on the analysis of the samples is required, a full laboratory data package can be provided.

If you have any questions, please contact me at (614) 424-4547. Questions of a technical nature should be directed to Mike Rectanus, Battelle's Work Assignment Leader, at (614) 424-7552.

Sincerely,

Bruce

Bruce E. Buxton, Ph.D.
Vice President and Sr. Program Manager

Enclosure

cc: Winston Lue, EPA WAM
Amy Hensley, EPA Deputy WAM
Molly Finn, EPA

Hydrodec PCB Disposal Demonstration
Analytical Results Summary
Contract No. EP-W-09-024
Work Assignment No. 0-05

The Hydrodec PCB Disposal Demonstration samples were collected on October 20 - 23, and were received at Battelle's Duxbury laboratory on October 26. The demonstration consisted of four test runs of Hydrodec's catalytic hydrogenation technology for dechlorinating PCB-contaminated transformer oil. The demonstration samples included four composite feed samples (HYD-F-1, -2, -3, and -4), six composite product samples (HYD-P-1, -1B, -2, -2B, -3, and -4), and one field blank sample (HYD-FB).

The feed and treated oil samples were extracted for Aroclor analysis following Battelle Standard Operating Procedure 5-334, *The Preparation of Oil Products and NAPL Samples for Semi-Volatile Analysis*, as described in Attachment 1 (PCB Aroclor – QA/QC Summary, Batch 09-0150). A field blank (empty jar) also was included with this sample batch. The jar was extracted by adding solvent to the jar, spiking it with surrogates, and shaking it three times with three separate aliquots of methylene chloride. All sample extracts were analyzed for PCB Aroclors by gas chromatography/electron capture detector (GC/ECD) following Battelle SOP 5-128, which is based on EPA Method 8082.

Table 1 provides a summary of the analytical results for the Aroclor analysis of the demonstration feed samples and field blank sample. Table 2 provides a summary of the analytical results for the treated samples.

Attachment 1 presents a summary of the Quality Assurance/Quality Control (QA/QC) results for the sample batch. Attachment 2 provides the final analytical data tables for the PCB Aroclor analyses for each sample batch. A full laboratory data package related to the analysis of the PCB Disposal Demonstration samples is available upon request.

In addition to the analysis of the PCB Disposal Demonstration samples, two QA performance evaluation samples were sent to Hydrodec on November 9. The two QA performance evaluation samples were prepared based on the EPA WAM's instructions of one sample at a concentration of less than 2 ppm PCB and one at a concentration between 2,000 and 3,000 ppm PCB. Both QA performance evaluation samples were comprised of Aroclor 1260 in transformer oil. Attachment 3 provides the certification documentation of the QA performance evaluation samples.

TABLE 1. SUMMARY OF THE FEED AND BLANK SAMPLE RESULTS

Client ID	HYD-F-1	HYD-F-2	HYD-F-3	HYD-F-4	HYD-FB
Battelle ID	Q8497-P	Q8499-P	Q8501-P	08506-P	08505-P
Collection Date	10/20/09	10/21/09	10/22/09	10/23/09	10/23/09
Extraction Date	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09
Analysis Date	11/23/09	11/24/09	11/24/09	11/24/09	11/24/09
Analytical Instrument	ECD	ECD	ECD	ECD	ECD
% Moisture	NA	NA	NA	NA	NA
Matrix	Oil	Oil	Oil	Oil	Blank
Sample Size	55 .25	52.01	51.24	50.70	NA
Size Unit-Basis	mg Oil	mg Oil	mg Oil	mg Oil	mg sample
Units	mg/kg Oil	mg/kg Oil	mg/kg Oil	mg/kg Oil	mg/kg
Aroclor 1016	U	U	U	U	U
Aroclor 1221	U	U	U	U	U
Aroclor 1232	U	U	U	U	U
Aroclor 1242	U	U	U	U	U
Aroclor 1248	U	U	U	U	U
Aroclor 1254	U	U	U	U	U
Aroclor 1260	2215.26	2242.42	1875.08	2219.96	<3.33 U
Total PCB (ppm)	2215.26	2242.42	1875.08	2219.96	<3.33

U - Analyte not detected at 3:1 signal:noise ratio; reporting limit is noted for Aroclor 1260.

TABLE 2. SUMMARY OF THE PRODUCT SAMPLE RESULTS

Client ID	HYD-P-1	HYD-P-1B	HYD-P-2	HYD-P-2B	HYD-P-3	HYD-P-4
Battelle ID	Q8498-P	Q8503-P	Q8500-P	Q8504-P	Q8501-P	Q8507-P
Collection Date	10/21/09	10/23/09	10/21/09	10/23/09	10/22/09	10/23/09
Extraction Date	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09	11/19/09
Analysis Date	11/24/09	11/24/09	11/24/09	11/24/09	11/24/09	11/28/09
Analytical Instrument	ECD	ECD	ECD	ECD	ECD	ECD
% Moisture	NA	NA	NA	NA	NA	NA
Matrix	Oil	Oil	Oil	Oil	Oil	Oil
Sample Size	57.40	56.01	52.61	55.68	59.33	50.80
Size Unit-Basis	mg Oil	mg Oil	mg Oil	mg Oil	mg Oil	mg Oil
Units	mg/kg Oil	mg/kg Oil	mg/kg Oil	mg/kg Oil	mg/kg Oil	mg/kg Oil
Aroclor 1016	U	U	U	U	U	U
Aroclor 1221	U	U	U	U	U	U
Aroclor 1232	U	U	U	U	U	U
Aroclor 1242	U	U	U	U	U	U
Aroclor 1248	U	U	U	U	U	U
Aroclor 1254	U	U	U	U	U	U
Aroclor 1260	<0.77 U	<0.79 U	<0.84 U	<0.80 U	<0.75 U	<0.87 U
Total PCB (ppm)	<0.77	<0.79	<0.84	<0.80	<0.75	<0.87

U - Analyte not detected at 3:1 signal:noise ratio; reporting limit is noted for Aroclor 1260.

ATTACHMENT 1

QA/QC SUMMARY

PCB Aroclor – QA/QC SUMMARY
Batch 09-0150

PROJECT: PCB Disposal Demonstrations
PARAMETER: Aroclor
LABORATORY: Battelle, Duxbury, MA
MATRIX: Oils
SAMPLE CUSTODY: Samples were collected between 10/20 and 10/23/2009 and received on 10/26/2009 at ambient temperature. Minor custody issues were noted and recorded. The sample custodian logged samples into the Battelle LIMS and assigned them unique IDs. The samples were stored in the walk-in refrigerator at 4°C until sample preparation could begin.

	Reference Method	Method Blank	Surrogate Recovery	LCS Recovery	Duplicate	Detection Limits (mg/kg oil)
PCB	EPA 8082 mod	<5 x MDL	40-120%	40-120% (for MS concentrations of analytes must be > 5 x background)	≤30% RPD (for analytes detected at a concentration > 5 x MDL)	~0.74 – 0.88

METHOD: Solid samples were extracted for Aroclors following Battelle SOP 5-334, *The Preparation of Oil Products and NAPL Samples for Semi-Volatile Analysis*. Approximately 50 mg of oil was diluted in hexane, spiked with surrogate internal standards, and an aliquot removed and applied to a florisil clean-up column. Based on information about the expected concentrations in the feed samples, those extracts were diluted prior to analysis. The extracts were spiked with internal standards (IS), and submitted for analysis. Extracts were analyzed using gas chromatography/electron capture detection (GC/ECD), following Battelle SOP 5-128. Sample data were quantified by the method of internal standards, using the IS compounds. Data were reported on a mg/kg basis. Following the initial analysis, the post-treatment samples were analyzed a second time using a lower dilution factor in order to confirm that PCB Aroclors were not detected at a level greater than or equal to 1 mg/kg oil.

A field blank (empty jar) also was included with this sample batch. The jar was extracted by adding solvent to the jar, spiking it with surrogates, and shaking it three times with three separate aliquots of methylene chloride. The solvent was concentrated, spiked with IS, and sent for analysis.

HOLDING TIMES: Samples were held at 4°C until processed. All sample extracts were analyzed within 40 days of extraction.

Batch	Extraction Date	Analysis Date
09-0150	11/19/2009	11/23/2009 – 11/25/2009

PCB Aroclor – QA/QC SUMMARY
Batch 09-0150

BLANK:

A procedural blank (PB) was prepared with the analytical batch. Blanks are analyzed to ensure that the sample extraction and analysis methods were free of contamination.

09-0150 – No target analytes were detected in the procedural blank.

Comments – None.

LABORATORY CONTROL SAMPLE:

A laboratory control sample (LCS) was prepared with the analytical batch. The percent recoveries of target analytes were calculated to measure data quality in terms of accuracy.

09-0150 – One exceedence noted.

Comments – The Aroclor 1260 recovery was within the laboratory control limits (40-120%). Aroclor 1016 was slightly over-recovered at 139%. Chromatography, integrations, and calculations were checked, and no discrepancies noted. Aroclor 1016 was not identified in any field samples. The data were qualified with "N." No further corrective actions taken.

LABORATORY DUPLICATE:

A laboratory duplicate sample was extracted with the analytical batch. The relative percent difference (RPD) was calculated to measure data quality in terms of precision.

09-0150 – No exceedences noted.

Comments – All RPDs were within laboratory control limits (< 30%). No target analytes were detected in either the primary sample or the laboratory duplicate.

SURROGATES:

Two surrogate compounds, PCB 34 and PCB 152, were added prior to extraction. The recovery of each surrogate compound was calculated to measure data quality in terms of accuracy (extraction efficiency).

09-0150 – No exceedences noted.

Comments – All surrogate recoveries were within laboratory control limits (40-120%).

CALIBRATION:

The GC/ECD instrument is calibrated with a 6-level calibration. The co-efficient of determination for the initial calibration (ICAL) must be > 0.995. Continuing calibration verification (CCV) samples are analyzed minimally every 24 hours. The percent difference for the CCV samples must be < 20%. Additionally, an Instrument Calibration Check (ICC) sample is run after each ICAL. The percent difference for the ICC also must be < 20%.

09-0150 – No ICAL exceedence noted.
No CCV exceedences noted.
No ICC exceedences noted.

Comments – None.

ATTACHMENT 2

FINAL ANALYTICAL DATA TABLES

Battelle
The Business of Innovation

Project Client: Battelle Columbus Operations
Project Name: PCB Disposal Demonstrations
Project Number: G934405-01

Client ID	HYD-F-1	HYD-P-1	HYD-F-2	HYD-P-2
Battelle ID	Q8497-P	Q8498-P	Q8499-P	Q8500-P
Sample Type	SA	SA	SA	SA
Collection Date	10/20/09	10/21/09	10/21/09	10/21/09
Extraction Date	11/19/09	11/19/09	11/19/09	11/19/09
Analysis Date	11/23/09	11/24/09	11/24/09	11/24/09
Analytical Instrument	ECD	ECD	ECD	ECD
% Moisture	NA	NA	NA	NA
% Lipid	NA	NA	NA	NA
Matrix	OIL	OIL	OIL	OIL
Sample Size	55.25	57.40	52.01	52.61
Size Unit-Basis	MG_OIL	MG_OIL	MG_OIL	MG_OIL
Units	MG/KG_OIL	MG/KG_OIL	MG/KG_OIL	MG/KG_OIL
Aroclor 1016	U	U	U	U
Aroclor 1221	U	U	U	U
Aroclor 1232	U	U	U	U
Aroclor 1242	U	U	U	U
Aroclor 1248	U	U	U	U
Aroclor 1254	U	U	U	U
Aroclor 1260	2215.26	0.77 U	2242.42	0.84 U
Surrogate Recoveries (%)				
Cl3(34)	108	115	105	115
Cl6(152)	93	99	93	97

Battelle
The Business of Innovation

Project Client: Battelle Columbus Operations
Project Name: PCB Disposal Demonstrations
Project Number: G934405-01

Client ID	HYD-F-3	HYD-P-3	HYD-P-1B	HYD-P-2B
Battelle ID	Q8501-P	Q8502-P	Q8503-P	Q8504-P
Sample Type	SA	SA	SA	SA
Collection Date	10/22/09	10/22/09	10/23/09	10/23/09
Extraction Date	11/19/09	11/19/09	11/19/09	11/19/09
Analysis Date	11/24/09	11/24/09	11/24/09	11/24/09
Analytical Instrument	ECD	ECD	ECD	ECD
% Moisture	NA	NA	NA	NA
% Lipid	NA	NA	NA	NA
Matrix	OIL	OIL	OIL	OIL
Sample Size	51.24	59.33	56.01	55.68
Size Unit-Basis	MG_OIL	MG_OIL	MG_OIL	MG_OIL
Units	MG/KG_OIL	MG/KG_OIL	MG/KG_OIL	MG/KG_OIL
Aroclor 1016	U	U	U	U
Aroclor 1221	U	U	U	U
Aroclor 1232	U	U	U	U
Aroclor 1242	U	U	U	U
Aroclor 1248	U	U	U	U
Aroclor 1254	U	U	U	U
Aroclor 1260	1875.08	0.75 U	0.79 U	0.8 U
Surrogate Recoveries (%)				
Cl3(34)	103	113	116	111
Cl6(152)	92	95	99	96

Battelle
The Business of Innovation

Project Client: Battelle Columbus Operations
Project Name: PCB Disposal Demonstrations
Project Number: G934405-01

Client ID	HYD-FB	HYD-F-4	HYD-P-4
Battelle ID	Q8505-P	Q8506-P	Q8507-P
Sample Type	SA	SA	SA
Collection Date	10/23/09	10/23/09	10/23/09
Extraction Date	11/19/09	11/19/09	11/19/09
Analysis Date	11/24/09	11/24/09	11/25/09
Analytical Instrument	ECD	ECD	ECD
% Moisture	NA	NA	NA
% Lipid	NA	NA	NA
Matrix	OIL	OIL	OIL
Sample Size	54.10	50.70	50.60
Size Unit-Basis	MG_OIL	MG_OIL	MG_OIL
Units	MG/KG	MG/KG_OIL	MG/KG_OIL
Aroclor 1016	U	U	U
Aroclor 1221	U	U	U
Aroclor 1232	U	U	U
Aroclor 1242	U	U	U
Aroclor 1248	U	U	U
Aroclor 1254	U	U	U
Aroclor 1260	3.33 U	2219.96	0.87 U
Surrogate Recoveries (%)			
Cl3(34)	99	100	114
Cl6(152)	91	87	92

Battelle
The Business of Innovation

Project Client: Battelle Columbus Operations
Project Name: PCB Disposal Demonstrations
Project Number: G934405-01

Client ID	Procedural Blank
Battelle ID	BN446PB-P
Sample Type	PB
Collection Date	11/19/09
Extraction Date	11/19/09
Analysis Date	11/23/09
Analytical Instrument	ECD
% Moisture	NA
% Lipid	NA
Matrix	OIL
Sample Size	54.10
Size Unit-Basis	MG_OIL
Units	MG/KG_OIL
Aroclor 1016	U
Aroclor 1221	U
Aroclor 1232	U
Aroclor 1242	U
Aroclor 1248	U
Aroclor 1254	U
Aroclor 1260	2.62 U
Surrogate Recoveries (%)	
Cl3(34)	97
Cl6(152)	92

Not Surrogate Corrected

Analyzed by Restucci Jr, Richard
12/17/2009

PB: O09-0150ECD-Master_128-Final w RL.xlsx

Battelle
The Business of Innovation

Project Client: Battelle Columbus Operations
Project Name: PCB Disposal Demonstrations
Project Number: G934405-01

Client ID	Laboratory Control Sample				
Battelle ID	BN447LCS-P				
Sample Type	LCS				
Collection Date	11/19/09				
Extraction Date	11/19/09				
Analysis Date	11/23/09				
Analytical Instrument	ECD				
% Moisture	NA				
% Lipid	NA				
Matrix	OIL				
Sample Size	1.00				
Size Unit-Basis	MG_OIL				
Units	MG/KG_OIL		Target	% Recovery	Qualifier
Aroclor 1016	2794.99		2006.00	139	N
Aroclor 1221		U			
Aroclor 1232		U			
Aroclor 1242		U			
Aroclor 1248		U			
Aroclor 1254		U			
Aroclor 1260	2152.09		2006.00	107	
Surrogate Recoveries (%)					
Cl3(34)	94				
Cl6(152)	87				

Battelle
The Business of Innovation

Project Client: Battelle Columbus Operations
Project Name: PCB Disposal Demonstrations
Project Number: G934405-01

Client ID	HYD-P-1		HYD-P-1			
Battelle ID	Q8498-P		Q8498DUP-P			
Sample Type	SA		QADU			
Collection Date	10/21/09		10/21/2009			
Extraction Date	11/19/09		11/19/2009			
Analysis Date	11/24/09		11/24/2009			
Analytical Instrument	ECD		ECD			
% Moisture	NA		NA			
% Lipid	NA		NA			
Matrix	OIL		OIL			
Sample Size	57.40		57.46			
Size Unit-Basis	MG_OIL		MG_OIL			
Units	MG/KG_OIL		MG/KG_OIL		RPD	Qualifier
Aroclor 1016	U		U		NA	
Aroclor 1221	U		U		NA	
Aroclor 1232	U		U		NA	
Aroclor 1242	U		U		NA	
Aroclor 1248	U		U		NA	
Aroclor 1254	U		U		NA	
Aroclor 1260	0.77	U	0.77	U	NA	
Surrogate Recoveries (%)						
Cl3(34)	115		118			
Cl6(152)	99		102			

Battelle
The Business of Innovation

Project Client: Battelle Columbus Operations
Project Name: PCB Disposal Demonstrations
Project Number: G934405-01

Glossary of Data Qualifiers

Flag: Application:

B	Analyte concentration found in the sample at a concentration <5x the level found in the procedural blank.
D	Dilution Run. Initial run outside linear range of instrument.
E	Estimate, result is greater than the highest concentration level in the calibration.
H	Surrogate diluted out. Used when surrogate recovery is affected by excessive dilution of the sample extract.
J	Analyte detected below the sample-specific Reporting Limit (RL).
m	Confirmation column manually over-ridden by analyst, dual column quantitative analysis only.
ME	Significant Matrix Interference - Estimated value.
MI	Significant Matrix Interference - value could not be determined or estimated.
n	Quality Control (QC) value is outside the accuracy or precision Data Quality Objective (DQO), but meets the contingency criteria.
N	Quality Control (QC) value is outside the accuracy or precision Data Quality Objective (DQO).
NA	Not applicable
p	Dual column value exceeds RPD criteria, dual column quantitative analysis only.
T	Holding Time (HT) exceeded.
U	Analyte not detected at 3:1 signal:noise ratio. The method detection limit (MDL) reported.

ERA

A Waters Company

Battelle Memorial Institute

Catalog No. 093 Custom Standard **Account No. B583157**
Sample ID # 1026-09-03.1

Aroclor 1260 in Transformer Oil
Mix #1

Parameter	Certified Value (mg/kg)	Performance Acceptance Limits™ (mg/kg)
Aroclor 1260	1.00	0.333 - 1.33

Standard Preparation Instructions: Sample is ready for preparation and analysis as received.

Preservative: None

The **Certified Values** are equal to 100% of the "made to" values as determined by volumetric and/or gravimetric measurements used during the manufacture of this product.

The ***Performance Acceptance Limits (PALs™)*** are based on actual historical data collected in ERA's Proficiency Testing program. The PALs™ reflect any inherent biases in the methods used to establish the limits and closely approximate the 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the PALs™ to realistically evaluate your performance against your peers. The PALs™ listed for this project may not be applicable since the final concentration is outside of ERA's normal concentration ranges for which the PALs™ have been developed. If your result falls outside of the PALs™, ERA recommends that you investigate potential sources of error in your preparation and/or analytical procedures. For further technical assistance, call ERA at 1-800-372-0122.

Prepared by: AJ Date: 11/9/09

Reviewed by: JML Date: 11/9/09

6000 W. 54th Avenue ■ Arvada, CO 80002 ■ 800-372-0122 ■ fax (303) 421-0159 ■ www.eraqc.com

ERA

A Waters Company

Battelle Memorial Institute

Catalog No. 093 Custom Standard **Account No. B583157**
Sample ID # 1026-09-03.2

Aroclor 1260 in Transformer Oil
Mix #2

Parameter	Certified Value (mg/kg)	Performance Acceptance Limits™ (mg/kg)
Aroclor 1260	2390	795 - 3170

Standard Preparation Instructions: Sample is ready for preparation and analysis as received.

Preservative: None

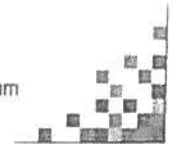
The **Certified Values** are equal to 100% of the "made to" values as determined by volumetric and/or gravimetric measurements used during the manufacture of this product.

The ***Performance Acceptance Limits (PALs™)*** are based on actual historical data collected in ERA's Proficiency Testing program. The PALs™ reflect any inherent biases in the methods used to establish the limits and closely approximate the 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the PALs™ to realistically evaluate your performance against your peers. The PALs™ listed for this project may not be applicable since the final concentration is outside of ERA's normal concentration ranges for which the PALs™ have been developed. If your result falls outside of the PALs™, ERA recommends that you investigate potential sources of error in your preparation and/or analytical procedures. For further technical assistance, call ERA at 1-800-372-0122.

Prepared by: AJC Reviewed by: JML

Date: 11/9/09 Date: 11/9/09

6000 W. 54th Avenue ■ Arvada, CO 80002 ■ 800-372-0122 ■ fax (303) 421-0159 ■ www.eraqc.com



Appendix D

Hydrodec Analytical

Hydrodec North America, LLC
Laboratory Results
RUN 1 October 20, 2009

SAMPLE ID	TIME	Hydrodec
D-1-FE-01	8:50	1961
D-1-FE-02	9:30	1888
D-1-FE-03	10:30	1935
D-1-FE-04	11:30	1894
D-1-FE-05	12:30	1922
D-1-FE-06	13:30	1996
D-1-FE-07	14:30	1861
D-1-CO-01	9:05	<1
D-1-CO-02	9:30	<1
D-1-CO-03	10:35	<1
D-1-CO-04	11:30	<1
D-1-CO-05	12:30	<1
D-1-CO-06	13:35	<1
D-1-CO-07	14:35	<1
D-1-CO-08	15:30	<1
D-1-CO-09	16:30	<1
D-1-FE-Comp*		2046
D-1-CO-Comp*		1.9
D-1-FE-CompR*		2046
D-1-CO-CompR*		<1

N/A = Not Applicable Since Reporting Lab Did Not Perform Analysis For Recorded Sample Results are reported in mg/kg

FE - Feedstock Oil (PCB) CO - Clean Oil (Processed)

Composite Sampling Make-up*

D-1-FE-CompR*	D-1-CO-CompR*
D-1-FE-01	D-1-CO-02
D-1-FE-02	D-1-CO-03
D-1-FE-03	D-1-CO-04
D-1-FE-04	D-1-CO-05
D-1-FE-05	D-1-CO-06
D-1-FE-06	D-1-CO-07
D-1-FE-07	

RUN 2 **October 21, 2009**

SAMPLE ID	TIME	Hydrodec
D-2-FE-01	8:40	1828
D-2-FE-02	9:30	1859
D-2-FE-03	10:35	1933
D-2-FE-04	11:30	1834
D-2-FE-05	N/A	N/A
D-2-FE-06	N/A	N/A
D-2-FE-07	N/A	N/A
D-2-CO-01	8:45	<1
D-2-CO-02	9:32	<1
D-2-CO-03	10:40	<1
D-2-CO-04	11:32	<1
D-2-CO-05	N/A	N/A
D-2-CO-06	N/A	N/A
D-2-CO-07	N/A	N/A
D-2-CO-08	N/A	N/A
D-2-CO-09	N/A	N/A
D-2-FE-Comp*		N/A
D-2-CO-Comp*		1.6
D-2-FE-CompR*		1957
D-2-CO-CompR*		<1

N/A = Not Applicable Since Reporting Lab Did Not Perform Analysis For Recorded Sample Results are reported in mg/kg

FE - Feedstock Oil (PCB) CO - Clean Oil (Processed)

Composite Sampling Make-up*

D-2-FE-CompR*	D-2-CO-CompR*
D-2-FE-01	D-1-CO-02
D-2-FE-02	D-1-CO-03
D-2-FE-03	D-1-CO-04
D-2-FE-04	

RUN 3 **October 22, 2009**

SAMPLE ID	TIME	Hydrodec
D-3-FE-01	8:40	1907
D-3-FE-02	9:35	1819
D-3-FE-03	10:35	1888
D-3-FE-04	11:35	1992
D-3-FE-05	12:40	2033
D-3-FE-06	1:40	2047
D-3-FE-07	2:35	<1
D-3-CO-01	8:42	<1
D-3-CO-02	9:38	<1
D-3-CO-03	10:35	<1
D-3-CO-04	11:35	<1
D-3-CO-05	12:40	<1
D-3-CO-06	1:40	<1
D-3-CO-07	2:35	<1
D-3-CO-08	3:30	<1
D-3-CO-09	4:40	<1
D-3-FE-Comp*		2095
D-3-CO-Comp*		<1

N/A = Not Applicable Since Reporting Lab Did Not Perform Analysis For Recorded Sample

Results are reported in mg/kg

FE - Feedstock Oil (PCB)

CO - Clean Oil (Processed)

Composite Sampling Make-up*

D-3-FE-Comp*	D-3-CO-Comp*
D-3-FE-01	D-3-CO-02
D-3-FE-02	D-3-CO-03
D-3-FE-03	D-3-CO-04
D-3-FE-04	D-3-CO-05
D-3-FE-05	D-3-CO-06
D-3-FE-06	D-3-CO-07
D-3-FE-07	

RUN 4 **October 23, 2009**

SAMPLE ID	TIME	Hydrodec
D-4-FE-01	9:05	1951
D-4-FE-02	9:45	1969
D-4-FE-03	10:30	2005
D-4-FE-04	11:30	1976
D-4-FE-05	12:30	1963
D-4-FE-06	1:30	1935
D-4-FE-07	2:30	1880
D-4-FE-08	3:30	N/A
D-4-FE-09	4:30	N/A
D-4-FE-10	5:30	N/A
D-4-FE-11	6:30	N/A
D-4-CO-01	9:05	<1
D-4-CO-02	9:45	<1
D-4-CO-03	10:30	<1
D-4-CO-04	11:30	<1
D-4-CO-05	12:30	<1
D-4-CO-06	1:30	<1
D-4-CO-07	2:30	<1
D-4-CO-08	3:30	<1
D-4-CO-09	4:30	<1
D-4-CO-10	5:30	<1
D-4-CO-11	6:30	<1
D-4-FE-Comp*		1952
D-4-CO-Comp*		<1
Trip Blank		N/A
C001B - Blank		N/A

N/A = Not Applicable Since Reporting Lab Did Not Perform Analysis For Recorded Sample Results are reported in mg/kg

FE - Feedstock Oil (PCB) CO - Clean Oil (Processed)

Composite Sampling Make-up*

D-4-FE-Comp*	D-4-CO-Comp*
D-4-FE-01	D-4-CO-02
D-4-FE-02	D-4-CO-03
D-4-FE-03	D-4-CO-04
D-4-FE-04	D-4-CO-05
D-4-FE-05	D-4-CO-06
D-4-FE-06	D-4-CO-07
D-4-FE-07	

Hydrodec North America – Canton Operations

PCB Analysis – Preparation of Standard Solutions

Date	05/05/2009
Standard Prepared	1260 - 50
Std Diluted (Show actual concentration from certificate or calculation)	AccuStandard® 125 Market St. - New Haven, CT 06513 - USA Tel. 203-786-5290 - www.accustandard.com 1 mL C-260-ST-2 Aroclor 1260 500 ppm w/w in Transformer oil Lot: B8040120 Exp. Apr 9, 2018 IRRITANT FOR LABORATORY USE ONLY ARNING: This product contains emicals known to the State of alifornia to cause cancer and birth efects or other reproductive harm. STORAGE Ambient Concentration 501.5
Mass Std Diluted	.8702
Aim total Mass	8.7349
Actual total mass	8.7350
Calculated actual conc. Of prepared std.	$\frac{.8702}{8.730} \times 501.5 = 49.9605 = 49.96$ mg/kg
Standard verified	

Date	10/18/2009
Standard Prepared	1260-50
Std Diluted (Show actual concentration from certificate or calculation)	AccuStandard® 125 Market St. - New Haven, CT 06513 - USA Tel. 203-786-5290 - www.accustandard.com 1 mL C-260-ST-2 Aroclor 1260 500 ppm w/w in Transformer oil Lot: B8040120 Exp. Apr 9, 2018 IRRITANT FOR LABORATORY USE ONLY /ARNING: This product contains emicals known to the State of alifornia to cause cancer and birth efects or other reproductive harm. STORAGE Ambient Concentration 501.5
Mass Std Diluted	.8170
Aim total Mass	8.250
Actual total mass	8.252
Calculated actual conc. Of prepared std.	$\frac{.8170}{8.252} \times 501.5 = 49.6516 = 49.65$ mg/kg
Standard verified	

125 Market Street
New Haven, CT 06513 USA

AccuStandard®, Inc.

Tel (203)786-5290 Fax (203)786-5287
Web AccuStandard.com

CERTIFICATE OF ANALYSIS

CATALOG NO. C-260-ST-2
DESCRIPTION: Aroclor 1260
EXPIRATION: Apr 9, 2018
LOT: B8040120
SOLVENT: Transformer oil

This product is guaranteed accurate to ±0.5% of the Certified Analyte concentration through the Expiration Date on the Label.

See reverse for additional certification information.

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[1] (µg/g)	Certified Analyte Concentration[2] (µg/g)
Aroclor 1260	11096-82-5	Tech Mix	501.5	501.5

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

1. All weights are traceable through NIST, Test No., 822/272103-05
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is ±4% which is the Combined Uncertainty uc(y). It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is Uc(y) *K where K is the coverage factor at the 95% confidence level (K=2).
3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

Certified by: R. Cooper

AccuStandard is accredited to ISO/IEC 17025:2005

Sample Information

Analysis Date & Time	: 11/19/2009 1:39:55 AM
User Name	: Admin
Vial#	: 20
Sample Name	: D-1-FE-01
Sample ID	: UNK-0020
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\091117-20.gcd
Original Data Name	: C:\GCsolution\Data\Project1\091117-20.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.996	2217693	624996	21.943	ppm
2	RT21.040	19.165	670594	184708	20.053	ppm
3	RT21.297	20.264	2680707	459288	20.505	ppm
4	RT22.512	21.561	1770690	456578	25.198	ppm
5	RT23.518	22.038	894096	234546	23.276	ppm
6	RT24.873	24.374	1530487	392515	20.787	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	21.821	ppm	9764268
Total		21.821		

Sample Information

Analysis Date & Time	: 11/19/2009 2:24:48 AM
User Name	: Admin
Vial#	: 21
Sample Name	: D-1-FE-02
Sample ID	: UNK-0021
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\091117-21.gcd
Original Data Name	: C:\GCsolution\Data\Project1\091117-21.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.998	3374785	948692	33.392	ppm
2	RT21.040	19.166	975509	279396	29.171	ppm
3	RT21.297	20.263	4138019	679240	31.652	ppm
4	RT22.512	21.560	2587411	699883	36.820	ppm
5	RT23.518	22.037	1382880	367497	36.001	ppm
6	RT24.873	24.373	2335249	593179	31.718	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	33.061	ppm	14793852
Total		33.061		

Sample Information

Analysis Date & Time	: 11/19/2009 3:09:39 AM
User Name	: Admin
Vial#	: 22
Sample Name	: D-1-FE-03
Sample ID	: UNK-0022
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\091117-22.gcd
Original Data Name	: C:\GCsolution\Data\Project1\091117-22.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.997	2813550	788642	27.839	ppm
2	RT21.040	19.165	837940	231787	25.057	ppm
3	RT21.297	20.263	3278562	558156	25.078	ppm
4	RT22.512	21.560	2118514	556251	30.147	ppm
5	RT23.518	22.036	1133907	292075	29.520	ppm
6	RT24.873	24.371	1892454	491277	25.704	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	26.985	ppm	12074927
Total		26.985		

Sample Information

Analysis Date & Time	: 11/19/2009 3:54:33 AM
User Name	: Admin
Vial#	: 23
Sample Name	: D-1-FE-04
Sample ID	: UNK-0023
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\09111
Original Data Name	: C:\GCsolution\Data\Project1\091117-23.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.996	3104887	839592	30.721	ppm
2	RT21.040	19.169	933586	260202	27.917	ppm
3	RT21.297	20.262	3762290	627913	28.778	ppm
4	RT22.512	21.560	2239184	610021	31.865	ppm
5	RT23.518	22.035	1256188	303593	32.703	ppm
6	RT24.873	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	25.244	ppm	11296136
Total		25.244		

Sample Information

Analysis Date & Time	: 11/19/2009 4:39:23 AM
User Name	: Admin
Vial#	: 24
Sample Name	: D-1-FE-05
Sample ID	: UNK-0024
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\091117-24.gcd
Original Data Name	: C:\GCsolution\Data\Project1\091117-24.gcd

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.994	2668682	742115	26.405	ppm
2	RT21.040	19.164	830738	227146	24.842	ppm
3	RT21.297	20.258	3178530	538047	24.313	ppm
4	RT22.512	21.557	2020671	541551	28.755	ppm
5	RT23.518	22.033	1075322	281141	27.994	ppm
6	RT24.873	24.369	1821784	459645	24.744	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	25.914	ppm	11595727
Total		25.914		

Sample Information

Analysis Date & Time	: 11/19/2009 5:24:18 AM
User Name	: Admin
Vial#	: 25
Sample Name	: D-1-FE-06-
Sample ID	: UNK-0025
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\091117-25.gcd
Original Data Name	: C:\GCsolution\Data\Project1\091117-25.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.993	2292771	646847	22.686	ppm
2	RT21.040	19.162	764142	200201	22.850	ppm
3	RT21.297	20.259	2727855	463419	20.866	ppm
4	RT22.512	21.556	1714409	474790	24.397	ppm
5	RT23.518	22.033	952404	237909	24.794	ppm
6	RT24.873	24.370	1512938	403230	20.549	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	22.268	ppm	9964520
Total		22.268		

Sample Information

Analysis Date & Time	: 11/19/2009 6:09:15 AM
User Name	: Admin
Vial#	: 26
Sample Name	: D-1-FE-06
Sample ID	: UNK-0026
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\091117-26.gcd
Original Data Name	: C:\GCsolution\Data\Project1\091117-26.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.999	5967571	1584807	59.046	ppm
2	RT21.040	19.165	1848252	506789	55.268	ppm
3	RT21.297	20.263	7141875	1179807	54.629	ppm
4	RT22.512	21.560	4490896	1170987	63.907	ppm
5	RT23.518	22.035	2469315	616019	64.285	ppm
6	RT24.873	24.373	4072542	1020405	55.314	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	58.083	ppm	25990450
Total		58.083		

Sample Information

Analysis Date & Time	: 11/19/2009 7:38:54 AM
User Name	: Admin
Vial#	: 27
Sample Name	: D-2-FE-01
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EPA1.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPA1.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.993	3827376	1041908	37.870	ppm
2	RT21.040	19.161	1145518	320507	34.255	ppm
3	RT21.297	20.258	4538923	774665	34.719	ppm
4	RT22.512	21.555	2904475	770547	41.332	ppm
5	RT23.518	22.031	1582130	408007	41.188	ppm
6	RT24.873	24.370	2680742	676002	36.410	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	37.274	ppm	16679165
Total		37.274		

Sample Information

Analysis Date & Time	: 11/19/2009 8:23:42 AM
User Name	: Admin
Vial#	: 28
Sample Name	: D2-FE-02
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EPA2.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPA2.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.997	4776925	1305830	47.265	ppm
2	RT21.040	19.163	1462732	401656	43.740	ppm
3	RT21.297	20.260	5775933	943985	44.181	ppm
4	RT22.512	21.558	3582415	969223	50.979	ppm
5	RT23.518	22.033	1981885	499922	51.595	ppm
6	RT24.873	24.370	3259178	826577	44.267	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	46.571	ppm	20839068
Total		46.571		

Sample Information

Analysis Date & Time	: 11/19/2009 9:08:37 AM
User Name	: Admin
Vial#	: 29
Sample Name	: D-2-FE-03
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EPA3.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPA3.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.992	2298478	629572	22.742	ppm
2	RT21.040	19.162	713327	190638	21.331	ppm
3	RT21.297	20.258	2623819	457987	20.070	ppm
4	RT22.512	21.556	1703604	458403	24.243	ppm
5	RT23.518	22.031	903924	234082	23.532	ppm
6	RT24.873	24.370	1479536	382893	20.095	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	21.728	ppm	9722690
Total		21.728		

Sample Information

Analysis Date & Time	: 11/19/2009 9:53:32 AM
User Name	: Admin
Vial#	: 30
Sample Name	: D-2-FE-04
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EPA4.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPA4.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.010	2963069	826717	29.318	ppm
2	RT21.040	19.176	927724	251769	27.742	ppm
3	RT21.297	20.273	3583803	605492	27.413	ppm
4	RT22.512	21.573	2230834	597877	31.746	ppm
5	RT23.518	22.049	1227759	311899	31.963	ppm
6	RT24.873	24.385	2025226	517845	27.507	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	28.959	ppm	12958414
Total		28.959		

Sample Information

Analysis Date & Time	: 11/19/2009 11:23:22 AM
User Name	: Admin
Vial#	: 31
Sample Name	: D-3-FE-01
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EPA6.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPA6.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.016	3175596	871707	31.421	ppm
2	RT21.040	19.184	966554	267551	28.903	ppm
3	RT21.297	20.279	3790209	643414	28.992	ppm
4	RT22.512	21.577	2431159	631416	34.596	ppm
5	RT23.518	22.053	1305519	336956	33.987	ppm
6	RT24.873	24.390	2156623	531643	29.292	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	30.897	ppm	13825659
Total		30.897		

Sample Information

Analysis Date & Time	: 11/19/2009 12:08:18 PM
User Name	: Admin
Vial#	: 32
Sample Name	: D-3-FE-02
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EPA7.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPA7.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.014	2367365	654097	23.424	ppm
2	RT21.040	19.182	699711	194469	20.924	ppm
3	RT21.297	20.280	2796750	479970	21.393	ppm
4	RT22.512	21.578	1813299	474145	25.804	ppm
5	RT23.518	22.055	964888	243634	25.119	ppm
6	RT24.873	24.389	1604593	411903	21.794	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	22.899	ppm	10246606
Total		22.899		

Sample Information

Analysis Date & Time	: 11/19/2009 12:53:12 PM
User Name	: Admin
Vial#	: 33
Sample Name	: D-3-FE-03
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EPA8.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPA8.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.021	10102005	2500474	99.954	ppm
2	RT21.040	19.184	3083945	819995	92.220	ppm
3	RT21.297	20.286	11847871	1928209	90.626	ppm
4	RT22.512	21.584	7638973	1912420	108.706	ppm
5	RT23.518	22.057	4076509	1015626	106.126	ppm
6	RT24.873	24.397	6806314	1653043	92.445	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	97.337	ppm	43555616
Total		97.337		

Sample Information

Analysis Date & Time	: 11/19/2009 3:08:06 PM
User Name	: Admin
Vial#	: 34
Sample Name	: D-3-FE-04
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EPA9.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPA9.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.026	6684808	1748753	66.143	ppm
2	RT21.040	19.192	1973198	524448	59.005	ppm
3	RT21.297	20.292	7901839	1295686	60.442	ppm
4	RT22.512	21.591	4998956	1281851	71.137	ppm
5	RT23.518	22.064	2583160	670330	67.249	ppm
6	RT24.873	24.404	4559592	1100089	61.929	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	64.141	ppm	28701554
Total		64.141		

Sample Information

Analysis Date & Time	: 11/19/2009 3:53:04 PM
User Name	: Admin
Vial#	: 35
Sample Name	: D-3-FE-05
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EPA10.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPA10.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.026	2449917	693311	24.241	ppm
2	RT21.040	19.194	745340	199843	22.288	ppm
3	RT21.297	20.292	3114783	518003	23.825	ppm
4	RT22.512	21.591	1789834	493643	25.470	ppm
5	RT23.518	22.065	984374	254042	25.627	ppm
6	RT24.873	24.404	1708898	437100	23.211	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	24.120	ppm	10793148
Total		24.120		

Sample Information

Analysis Date & Time	: 11/19/2009 4:38:02 PM
User Name	: Admin
Vial#	: 36
Sample Name	: D-3-FE-06
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EPA11.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPA11.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.028	4378966	1186597	43.327	ppm
2	RT21.040	19.194	1180837	341862	35.311	ppm
3	RT21.297	20.293	5403696	885980	41.334	ppm
4	RT22.512	21.592	3262507	857075	46.427	ppm
5	RT23.518	22.067	1939040	446354	50.480	ppm
6	RT24.873	24.405	2945623	742980	40.008	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	42.708	ppm	19110668
Total		42.708		

Sample Information

Analysis Date & Time	: 11/19/2009 5:23:00 PM
User Name	: Admin
Vial#	: 37
Sample Name	: D-3-FE-07
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EPA12.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPA12.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	0.000	0	0	0.000	ppm
2	RT21.040	0.000	0	0	0.000	ppm
3	RT21.297	0.000	0	0	0.000	ppm
4	RT22.512	0.000	0	0	0.000	ppm
5	RT23.518	0.000	0	0	0.000	ppm
6	RT24.873	24.446	101230	23534	1.375	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.226	ppm	101230
Total		0.226		

Sample Information

Analysis Date & Time	: 11/19/2009 8:22:49 PM
User Name	: Admin
Vial#	: 40
Sample Name	: D-3-FE-COMP
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EPA16.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPA16.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.018	3621016	983046	35.828	ppm
2	RT21.040	19.186	1016241	283651	30.389	ppm
3	RT21.297	20.285	4093874	708282	31.315	ppm
4	RT22.512	21.583	2599704	714647	36.995	ppm
5	RT23.518	22.058	1386692	358445	36.100	ppm
6	RT24.873	24.398	2280196	581432	30.970	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	33.517	ppm	14997723
Total		33.517		

Sample Information

Analysis Date & Time	: 11/19/2009 2:51:35 PM
User Name	: Admin
Vial#	: 1
Sample Name	: D-4-FE-01
Sample ID	: UNK-0001
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\091111-1.gcd
Original Data Name	: C:\GCsolution\Data\Project1\091111-1.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\100304.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT18.906	18.584	383219	101088	46.428	ppm
2	RT20.179	20.179	723869	151223	74.959	ppm
3	RT21.135	21.136	278452	74617	53.792	ppm
4	RT21.614	0.000	0	0	0.000	ppm
5	RT22.620	22.618	594595	141955	82.161	ppm
6	RT23.943	23.943	482259	102655	73.020	ppm
7	RT26.629	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	65.498	ppm	2462395
Total		65.498		

Sample Information

Analysis Date & Time	: 11/19/2009 3:39:26 PM
User Name	: Admin
Vial#	: 2
Sample Name	: D-4-FE-02
Sample ID	: UNK-0002
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\091111-2.gcd
Original Data Name	: C:\GCsolution\Data\Project1\091111-2.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\100304.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT18.906	18.906	914159	243212	36.258	ppm
2	RT20.179	20.179	1104738	233530	35.365	ppm
3	RT21.135	21.135	617836	148590	55.908	ppm
4	RT21.614	21.614	118583	29384	15.420	ppm
5	RT22.620	22.620	834675	184093	36.981	ppm
6	RT23.943	23.943	735556	158001	36.398	ppm
7	RT26.629	26.629	270374	55598	48.540	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	36.668	ppm	4325547
Total		36.668		

Sample Information

Analysis Date & Time	: 3/15/2010 2:15:29 PM
User Name	: Admin
Vial#	: 25
Sample Name	: D-4-FE-03
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\D-4-FE-02.gcd
Original Data Name	: C:\GCsolution\Data\Project1\D-4-FE-02.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\091221.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT18.906	18.906	907475	243704	35.993	ppm
2	RT20.179	20.179	1074711	228468	34.403	ppm
3	RT21.135	21.135	575488	146925	52.075	ppm
4	RT21.614	21.614	96394	26703	12.535	ppm
5	RT22.620	22.620	765307	181292	33.907	ppm
6	RT23.943	23.943	643115	145816	31.824	ppm
7	RT26.629	26.629	166868	41278	29.958	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	34.438	ppm	4062490
Total		34.438		

Sample Information

Analysis Date & Time	: 11/19/2009 12:45:36 PM
User Name	: Admin
Vial#	: 1
Sample Name	: D-4-FE-04
Sample ID	: UNK-0001
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\091119-1-D001.gcd
Original Data Name	: C:\GCsolution\Data\Project1\091119-1-D001.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\100304.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.043	18.992	848410	225607	26.003	ppm
2	RT20.173	20.124	987675	213874	25.959	ppm
3	RT20.573	21.078	386671	103601	26.394	ppm
4	RT21.761	21.709	259256	65248	25.486	ppm
5	RT22.772	22.719	724025	173193	24.706	ppm
6	RT23.038	24.037	655657	140665	24.715	ppm
7	RT24.799	26.740	162301	41062	22.108	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	25.521	ppm	3861694
Total		25.521		

Sample Information

Analysis Date & Time	: 3/4/2010 10:45:19 PM
User Name	: Admin
Vial#	: 10
Sample Name	: D-4-FE-5
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\D-4-FE-5.gcd
Original Data Name	: C:\GCsolution\Data\Project1\D-4-FE-5.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\100304.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.043	18.992	850110	227742	26.055	ppm
2	RT20.173	20.124	967493	214538	25.428	ppm
3	RT20.573	21.078	389350	99858	26.577	ppm
4	RT21.761	21.709	253801	64558	24.950	ppm
5	RT22.772	22.719	746610	179485	25.477	ppm
6	RT23.038	24.037	648703	145191	24.453	ppm
7	RT24.799	26.740	167433	41059	22.807	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	25.484	ppm	3856067
Total		25.484		

Sample Information

Analysis Date & Time	: 3/4/2010 11:33:16 PM
User Name	: Admin
Vial#	: 11
Sample Name	: D-4-FE-6
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\D-4-FE-6.gcd
Original Data Name	: C:\GCsolution\Data\Project1\D-4-FE-6.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\100304.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.043	18.992	917047	248643	28.107	ppm
2	RT20.173	20.124	1047267	229104	27.525	ppm
3	RT20.573	21.078	401087	106415	27.378	ppm
4	RT21.761	21.709	282095	69195	27.731	ppm
5	RT22.772	22.719	791194	182563	26.998	ppm
6	RT23.038	24.037	689264	186704	25.982	ppm
7	RT24.799	26.740	179152	44274	24.403	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	27.281	ppm	4127953
Total		27.281		

Sample Information

Analysis Date & Time	: 3/5/2010 12:21:13 AM
User Name	: Admin
Vial#	: 12
Sample Name	: D-4-FE-7
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\D-4-FE-7.gcd
Original Data Name	: C:\GCsolution\Data\Project1\D-4-FE-7.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\100304.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.043	18.992	915064	249218	28.046	ppm
2	RT20.173	20.124	1067890	232943	28.067	ppm
3	RT20.573	21.078	401389	106497	27.399	ppm
4	RT21.761	21.709	288209	71535	28.332	ppm
5	RT22.772	22.719	838340	193939	28.607	ppm
6	RT23.038	24.037	699075	154952	26.352	ppm
7	RT24.799	26.740	177743	44399	24.211	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	27.823	ppm	4209967
Total		27.823		

Sample Information

Analysis Date & Time	: 11/19/2009 9:07:46 PM
User Name	: Admin
Vial#	: 41
Sample Name	: D-4-FE-COMP
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EAP17.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EAP17.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\iso octane on ly.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.012	4551502	1231515	45.035	ppm
2	RT21.040	19.180	1362784	374394	40.751	ppm
3	RT21.297	20.278	5115026	902195	39.126	ppm
4	RT22.512	21.577	3307986	871208	47.074	ppm
5	RT23.518	22.052	1675892	452387	43.629	ppm
6	RT24.873	24.393	2815817	735010	38.245	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	42.079	ppm	18829007
Total		42.079		

Sample Information

Analysis Date & Time	: 10/20/2009 9:00:34 AM
User Name	: Admin
Vial#	: 13
Sample Name	: D-1-CO-01
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\D-1-C(
Original Data Name	: C:\GCsolution\Data\Project1\D-1-CO-01.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\10-19-2009.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.723	54592	10955	0.250	ppm
2	RT21.040	21.029	169355	28822	0.611	ppm
3	RT21.297	21.278	50522	13453	0.081	ppm
4	RT22.512	22.478	37495	10617	0.108	ppm
5	RT23.518	23.532	19749	4548	0.118	ppm
6	RT24.873	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.173	ppm	331713
Total		0.173		

Sample Information

Analysis Date & Time	: 10/20/2009 9:45:46 AM
User Name	: Admin
Vial#	: 14
Sample Name	: D-1-CO-02
Sample ID	: TEST 1
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\D-1-CO-02.gcd
Original Data Name	: C:\GCsolution\Data\Project1\D-1-CO-02.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\10-19-2009.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.733	692335	153344	0.301	ppm
2	RT21.040	21.015	632285	117688	0.349	ppm
3	RT21.297	21.270	160500	54092	0.121	ppm
4	RT22.512	22.482	541615	144013	0.272	ppm
5	RT23.518	23.491	593454	113653	0.304	ppm
6	RT24.873	24.846	1013935	154426	0.637	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.331	ppm	3634124
Total		0.331		

Sample Information

Analysis Date & Time	: 10/20/2009 12:04:44 PM
User Name	: Admin
Vial#	: 17
Sample Name	: D-1-CO-03
Sample ID	: TEST1
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\D-1-C(
Original Data Name	: C:\GCsolution\Data\Project1\D-1-CO-03.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\10-19-2009.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	0.000	0	0	0.000	ppm
2	RT21.040	21.044	142615	19207	0.079	ppm
3	RT21.297	21.302	74951	19830	0.056	ppm
4	RT22.512	22.465	61770	10124	0.031	ppm
5	RT23.518	23.482	99922	16607	0.051	ppm
6	RT24.873	24.840	2659	1657	0.002	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.035	ppm	381918
Total		0.035		

Sample Information

Analysis Date & Time	: 10/20/2009 12:49:56 PM
User Name	: Admin
Vial#	: 1
Sample Name	: D-1-CO-04
Sample ID	: TEST1
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\D-1-C(
Original Data Name	: C:\GCsolution\Data\Project1\D-1-CO-04.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\10-19-2009.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.759	253033	25585	0.110	ppm
2	RT21.040	21.048	221934	29270	0.122	ppm
3	RT21.297	0.000	0	0	0.000	ppm
4	RT22.512	0.000	0	0	0.000	ppm
5	RT23.518	23.513	72541	14517	0.037	ppm
6	RT24.873	24.887	97591	19122	0.061	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.059	ppm	645099
Total		0.059		

Sample Information

Analysis Date & Time	: 10/20/2009 1:35:11 PM
User Name	: Admin
Vial#	: 1
Sample Name	: D-1-CO-05
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\D-1-C(
Original Data Name	: C:\GCsolution\Data\Project1\D-1-CO-05.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\10-19-2009.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	0.000	0	0	0.000	ppm
2	RT21.040	21.012	197296	23162	0.711	ppm
3	RT21.297	0.000	0	0	0.000	ppm
4	RT22.512	22.482	255130	19251	0.732	ppm
5	RT23.518	0.000	0	0	0.000	ppm
6	RT24.873	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.235	ppm	452425
Total		0.235		

Sample Information

Analysis Date & Time	: 10/20/2009 4:10:38 PM
User Name	: Admin
Vial#	: 19
Sample Name	: D-1-CO-06
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\D-1-C(
Original Data Name	: C:\GCsolution\Data\Project1\D-1-C0-04-6.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\10-19-2009.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	0.000	0	0	0.000	ppm
2	RT21.040	21.031	248801	28757	0.897	ppm
3	RT21.297	0.000	0	0	0.000	ppm
4	RT22.512	0.000	0	0	0.000	ppm
5	RT23.518	0.000	0	0	0.000	ppm
6	RT24.873	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.129	ppm	248801
Total		0.129		

Sample Information

Analysis Date & Time	: 10/21/2009 12:12:53 PM
User Name	: Admin
Vial#	: 15
Sample Name	: D-1-CO-07
Sample ID	: UNK-0015
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\09102]
Original Data Name	: C:\GCsolution\Data\Project1\091021-15.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-EPA.gcb

[Description]
EPA TRAIL DAY 2

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.760	902190	172176	0.000	ppm
2	RT21.040	21.040	943629	138309	0.000	ppm
3	RT21.291	21.291	166488	30635	0.000	ppm
4	RT22.512	22.512	495140	110450	0.000	ppm
5	RT23.518	23.518	1745750	366055	0.000	ppm
6	RTT24.873	24.873	2601180	399445	0.000	ppm

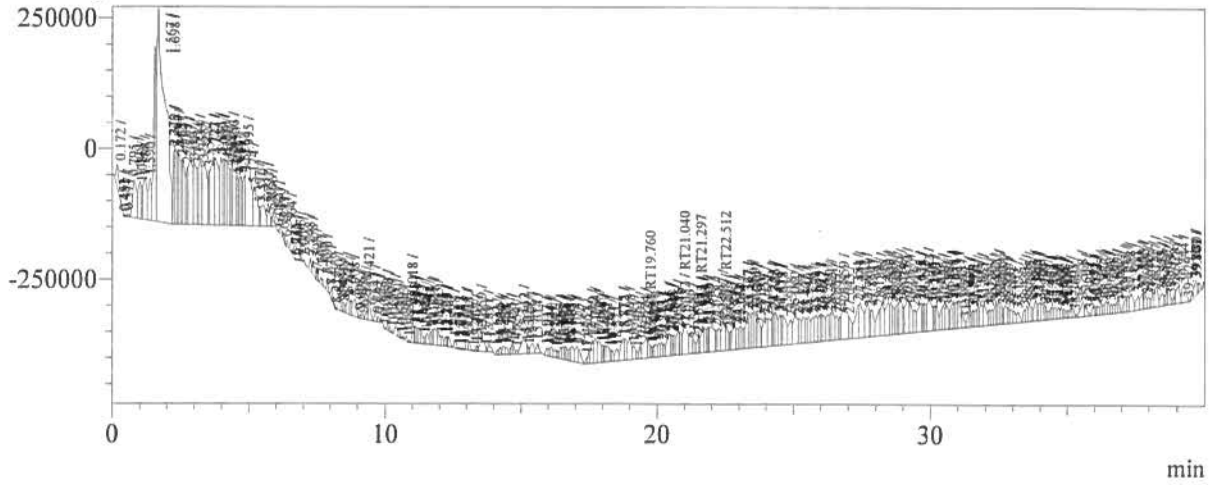
Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.000	ppm	6854376
Total		0.000		

Sample Information

Analysis Date & Time	: 10/20/2009 3:05:39 PM
User Name	: Admin
Vial#	: 19
Sample Name	: D-1-CO-08
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\D-1-C(
Original Data Name	: C:\GCsolution\Data\Project1\D-1-CO-08.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\10-19-2009.gcb

ram D-1-CO-08 C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\D-1-CO-08.gcd -



Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	19.760	83558	23895	0.036	ppm
2	RT21.040	21.032	679120	55400	0.375	ppm
3	RT21.297	21.312	164813	36368	0.124	ppm
4	RT22.512	22.528	280076	48045	0.141	ppm
5	RT23.518	0.000	0	0	0.000	ppm
6	RT24.873	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.110	ppm	1207567
Total		0.110		

Sample Information

Analysis Date & Time : 10/21/2009 8:26:52 AM
User Name : Admin
Vial# : 13
Sample Name : D-1-CO-09
Sample ID : UNK-0013
Sample Type : Unknown
Injection Volume : 2.00
Multi Injection# : 1
Dilution Factor : 1
ISTD Amount :
Sample Amount : 1
Level# : 1
Data Name : C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\091021
Original Data Name : C:\GCsolution\Data\Project1\091021-13.gcd
Baseline Data Name :
Method Name : C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name : C:\GCsolution\System\DEFAULT.gcr
Batch Name : C:\GCsolution\Data\Project1\C091021-EPA.gcb
[Description]
EPA TRAIL DAY 2

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	0.000	0	0	0.000	ppm
2	RT21.040	0.000	0	0	0.000	ppm
3	RT21.297	0.000	0	0	0.000	ppm
4	RT22.512	0.000	0	0	0.000	ppm
5	RT23.518	23.502	3341	2128	0.041	ppm
6	RT24.873	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.003	ppm	3341
Total		0.003		

Sample Information

Analysis Date & Time	: 10/21/2009 9:12:05 AM
User Name	: Admin
Vial#	: 14
Sample Name	: D-2-CO-01
Sample ID	: UNK-0014
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\091021
Original Data Name	: C:\GCsolution\Data\Project1\091021-14.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-EPA.gcb

[Description]
EPA TRAIL DAY 2

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	0.000	0	0	0.000	ppm
2	RT21.040	21.041	88510	21916	0.319	ppm
3	RT21.291	0.000	0	0	0.000	ppm
4	RT22.512	0.000	0	0	0.000	ppm
5	RT23.518	23.519	341967	40816	2.035	ppm
6	RT24.873	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.224	ppm	430477

Sample Information

Analysis Date & Time	: 10/24/2009 5:02:16 PM
User Name	: Admin
Vial#	: 23
Sample Name	: D-2-CO-2
Sample ID	: UNK-0023
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\EPADEMO091020-25-23.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-23.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.647	0.000	0	0	0.000	ppm
2	RT20.384	0.000	0	0	0.000	ppm
3	RT20.703	0.000	0	0	0.000	ppm
4	RT21.676	0.000	0	0	0.000	ppm
5	RT22.151	0.000	0	0	0.000	ppm
6	RT23.152	0.000	0	0	0.000	ppm
7	RT24.396	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.000	ppm	0
Total		0.000		

Sample Information

Analysis Date & Time	: 10/24/2009 5:47:07 PM
User Name	: Admin
Vial#	: 24
Sample Name	: D-2-CO-3
Sample ID	: UNK-0024
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\EPADEMO091020-25-24.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-24.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.647	19.550	114474	26098	0.951	ppm
2	RT20.384	20.290	103768	25656	0.555	ppm
3	RT20.703	20.612	212626	40603	1.557	ppm
4	RT21.676	21.592	176530	47915	1.058	ppm
5	RT22.151	21.999	26618	7710	0.220	ppm
6	RT23.152	23.152	69985	16363	0.226	ppm
7	RT24.396	24.514	104457	14244	0.370	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.677	ppm	704000
Total		0.677		

Sample Information

Analysis Date & Time	: 10/24/2009 6:31:57 PM
User Name	: Admin
Vial#	: 25
Sample Name	: D-2-CO-4
Sample ID	: UNK-0025
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\EPADEMO091020-25-25.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-25.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.647	19.550	296292	72099	2.462	ppm
2	RT20.384	0.000	0	0	0.000	ppm
3	RT20.703	0.000	0	0	0.000	ppm
4	RT21.676	21.592	153883	26789	0.922	ppm
5	RT22.151	22.228	39548	7042	0.327	ppm
6	RT23.152	23.145	45469	9047	0.147	ppm
7	RT24.396	24.359	31320	9514	0.111	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.515	ppm	535192
Total		0.515		

Sample Information

Analysis Date & Time	: 10/25/2009 6:30:05 AM
User Name	: Admin
Vial#	: 38
Sample Name	: D-CO4-05
Sample ID	: UNK-0038
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	: P-2-CO-05
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\EPAD
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-38.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.087	45463	14045	0.138	ppm
2	RT21.040	19.377	77444	20776	0.231	ppm
3	RT21.297	20.602	60797	13979	0.171	ppm
4	RT22.512	23.412	305016	61004	0.692	ppm
5	RT23.518	24.686	71638	13996	0.447	ppm
6	RT24.873	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.269	ppm	560358
Total		0.269		

Sample Information

Analysis Date & Time	: 10/24/2009 9:46:32 PM
User Name	: Admin
Vial#	: 27
Sample Name	: D-3-CO-1
Sample ID	: UNK-0027
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\EPAD
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-27.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.043	0.000	0	0	0.000	ppm
2	RT19.868	0.000	0	0	0.000	ppm
3	RT20.940	0.000	0	0	0.000	ppm
4	RT21.193	0.000	0	0	0.000	ppm
5	RT22.403	0.000	0	0	0.000	ppm
6	RT24.670	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.000	ppm	0
Total		0.000		

Sample Information

Analysis Date & Time	: 10/24/2009 10:31:22 PM
User Name	: Admin
Vial#	: 28
Sample Name	: D-3-CO-2
Sample ID	: UNK-0028
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\EPAD
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-28.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.043	0.000	0	0	0.000	ppm
2	RT19.868	0.000	0	0	0.000	ppm
3	RT20.940	0.000	0	0	0.000	ppm
4	RT21.193	0.000	0	0	0.000	ppm
5	RT22.403	0.000	0	0	0.000	ppm
6	RT24.670	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.000	ppm	0
Total		0.000		

Sample Information

Analysis Date & Time	: 10/24/2009 11:16:16 PM
User Name	: Admin
Vial#	: 29
Sample Name	: D-3-CO-3
Sample ID	: UNK-0029
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\EPAD
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-29.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT18.906	0.000	0	0	0.000	ppm
2	RT20.179	0.000	0	0	0.000	ppm
3	RT21.135	0.000	0	0	0.000	ppm
4	RT21.614	0.000	0	0	0.000	ppm
5	RT22.620	0.000	0	0	0.000	ppm
6	RT23.943	0.000	0	0	0.000	ppm
7	RT26.629	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.000	ppm	0
Total		0.000		

Sample Information

Analysis Date & Time	: 10/25/2009 12:46:02 AM
User Name	: Admin
Vial#	: 31
Sample Name	: D-3-CO-5
Sample ID	: UNK-0031
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\EPAD
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-31.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT18.906	0.000	0	0	0.000	ppm
2	RT20.179	0.000	0	0	0.000	ppm
3	RT21.135	0.000	0	0	0.000	ppm
4	RT21.614	0.000	0	0	0.000	ppm
5	RT22.620	0.000	0	0	0.000	ppm
6	RT23.943	0.000	0	0	0.000	ppm
7	RT26.629	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.000	ppm	0
Total		0.000		

Sample Information

Analysis Date & Time	: 10/25/2009 11:14:23 AM
User Name	: Admin
Vial#	: 42
Sample Name	: E TANK-1
Sample ID	: UNK-0042
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	: C-3-CB-8
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\EPAD
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-42.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.105	113785	20442	0.346	ppm
2	RT21.040	19.337	78004	22496	0.233	ppm
3	RT21.297	20.570	69736	32463	0.196	ppm
4	RT22.512	23.412	250385	56506	0.568	ppm
5	RT23.518	24.747	329681	38190	2.059	ppm
6	RT24.873	21.881	141178	38720	0.306	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.472	ppm	982768
Total		0.472		

Sample Information

Analysis Date & Time	: 10/25/2009 10:29:33 AM
User Name	: Admin
Vial#	: 41
Sample Name	: E-TANK-2
Sample ID	: UNK-0041
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\EPAD
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-41.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

D-3-c~-09

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT18.906	0.000	0	0	0.000	ppm
2	RT20.179	0.000	0	0	0.000	ppm
3	RT21.135	0.000	0	0	0.000	ppm
4	RT21.614	0.000	0	0	0.000	ppm
5	RT22.620	0.000	0	0	0.000	ppm
6	RT23.943	0.000	0	0	0.000	ppm
7	RT26.629	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.000	ppm	0
Total		0.000		

Sample Information

Analysis Date & Time	: 10/25/2009 3:00:45 AM
User Name	: Admin
Vial#	: 33
Sample Name	: D-3-CO-COMP
Sample ID	: UNK-0033
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\EPAD
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-33.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.083	48591	12325	0.148	ppm
2	RT21.040	19.309	54528	12168	0.163	ppm
3	RT21.297	20.619	185658	23228	0.523	ppm
4	RT22.512	23.388	61912	14227	0.140	ppm
5	RT23.518	24.688	167807	28598	1.048	ppm
6	RT24.873	21.879	13156	5335	0.029	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.255	ppm	531653
Total		0.255		

Sample Information

Analysis Date & Time	: 10/24/2009 4:32:33 PM
User Name	: Admin
Vial#	: 22
Sample Name	: D-3-CO-COMP R
Sample ID	: UNK-0022
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 090402-091231\EPAD
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-22.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.647	0.000	0	0	0.000	ppm
2	RT20.384	0.000	0	0	0.000	ppm
3	RT20.703	0.000	0	0	0.000	ppm
4	RT21.676	0.000	0	0	0.000	ppm
5	RT22.151	0.000	0	0	0.000	ppm
6	RT23.152	0.000	0	0	0.000	ppm
7	RT24.396	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.000	ppm	0
Total		0.000		

Sample Information

Analysis Date & Time	: 10/25/2009 2:45:39 AM
User Name	: Admin
Vial#	: 34
Sample Name	: D-CO-4-01
Sample ID	: UNK-0034
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\EPADEMO091020-25-34.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-34.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.647	19.401	42461	13018	0.353	ppm
2	RT20.384	20.290	172016	32962	0.919	ppm
3	RT20.703	20.485	42153	10279	0.309	ppm
4	RT21.676	21.592	65659	20959	0.393	ppm
5	RT22.151	22.072	54678	16806	0.452	ppm
6	RT23.152	23.031	103173	14940	0.334	ppm
7	RT24.396	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.462	ppm	480140
Total		0.462		

Sample Information

Analysis Date & Time	: 10/25/2009 3:30:30 AM
User Name	: Admin
Vial#	: 35
Sample Name	: D-CO-4-02
Sample ID	: UNK-0035
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\EPADEMO091020-25-35.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-35.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	0.000	0	0	0.000	ppm
2	RT21.040	19.337	59669	19762	0.178	ppm
3	RT21.297	0.000	0	0	0.000	ppm
4	RT22.512	23.401	30266	8468	0.069	ppm
5	RT23.518	24.731	47243	8041	0.295	ppm
6	RT24.873	21.881	43164	20224	0.094	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.087	ppm	180343
Total		0.087		

Sample Information

Analysis Date & Time	: 10/25/2009 5:00:13 AM
User Name	: Admin
Vial#	: 36
Sample Name	: D-CO-4-03
Sample ID	: UNK-0036
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\EPADEMO091020-25-36.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-36.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.076	85965	18494	0.261	ppm
2	RT21.040	19.310	21181	8933	0.063	ppm
3	RT21.297	20.550	166942	21977	0.470	ppm
4	RT22.512	23.412	154207	45380	0.350	ppm
5	RT23.518	24.703	68447	24295	0.428	ppm
6	RT24.873	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.239	ppm	496741
Total		0.239		

Sample Information

Analysis Date & Time	: 10/25/2009 5:45:10 AM
User Name	: Admin
Vial#	: 37
Sample Name	: D-CO-4-04
Sample ID	: UNK-0037
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\EPADEMO091020-25-37.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-37.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.146	23758	7833	0.072	ppm
2	RT21.040	19.337	40388	13435	0.121	ppm
3	RT21.297	20.583	107720	18010	0.303	ppm
4	RT22.512	23.412	90985	39982	0.206	ppm
5	RT23.518	24.709	104996	32933	0.656	ppm
6	RT24.873	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.177	ppm	367847
Total		0.177		

Sample Information

Analysis Date & Time	: 10/25/2009 6:30:05 AM
User Name	: Admin
Vial#	: 38
Sample Name	: D-CO-4-05
Sample ID	: UNK-0038
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\EPADEMO091020-25-38.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-38.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.087	45463	14045	0.138	ppm
2	RT21.040	19.377	77444	20776	0.231	ppm
3	RT21.297	20.602	60797	13979	0.171	ppm
4	RT22.512	23.412	305016	61004	0.692	ppm
5	RT23.518	24.686	71638	13996	0.447	ppm
6	RT24.873	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.269	ppm	560358
Total		0.269		

Sample Information

Analysis Date & Time	: 10/25/2009 7:14:58 AM
User Name	: Admin
Vial#	: 39
Sample Name	: D-CO-4-06
Sample ID	: UNK-0039
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\EPADEMO091020-25-39.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-39.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.647	19.555	21329	5376	0.177	ppm
2	RT20.384	0.000	0	0	0.000	ppm
3	RT20.703	20.586	34656	11793	0.254	ppm
4	RT21.676	21.393	16450	6908	0.099	ppm
5	RT22.151	22.108	53602	14376	0.443	ppm
6	RT23.152	23.304	23081	7512	0.075	ppm
7	RT24.396	24.252	44268	10879	0.157	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.143	ppm	149117
Total		0.143		

Sample Information

Analysis Date & Time	: 10/25/2009 7:59:47 AM
User Name	: Admin
Vial#	: 40
Sample Name	: D-CO-4-07
Sample ID	: UNK-0040
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\EPADEMO091020-25-40.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPADEMO091020-25-40.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\C091021-23-EPA.gcb

Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.760	18.098	10312	5171	0.031	ppm
2	RT21.040	19.337	120247	32787	0.359	ppm
3	RT21.297	20.570	16837	7325	0.047	ppm
4	RT22.512	23.412	152313	34633	0.346	ppm
5	RT23.518	0.000	0	0	0.000	ppm
6	RT24.873	0.000	0	0	0.000	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	0.144	ppm	299709
Total		0.144		

Appendix E

S.D. Myers Analytical Data

ACTS 4:12
SDMYERS INC.
180 South Avenue
Tallmadge, Ohio 44278
www.sdmyers.com
330-630-7000 800-444-9580

PCBs and PCB Testing
(revised March 24, 1999)

THE INFORMATION CONTAINED IN THIS NOTICE IS FOR GUIDANCE ONLY RELATIVE TO THE PCB TEST RESULTS ENCLOSED. THIS DOES NOT CONSTITUTE ANY INTERPRETATION OF THE PCB RULES NOR IS IT TO BE CONSTRUED AS REGULATORY OR LEGAL ADVICE OF ANY KIND.

Enclosed with this package are the results of your PCB content tests. Federal PCB regulations (40 CFR 761.3) defines three classifications for transformers and other electrical equipment based on the PCB content:

1. **PCB** – Transformers and electrical equipment that contain PCBs 500 ppm (mg/kg) or greater.
2. **PCB-Contaminated** – Transformers and electrical equipment that contain PCBs 50 ppm or greater but less than 500 ppm.
3. **Non-PCB** – Transformers and electrical equipment that contain PCBs less than 50 ppm.

The federal PCB rules regulate the continued authorized use and disposal of PCBs and of equipment and materials that contain or are contaminated by PCBs. Among these rules is a requirement that all PCB transformers must be registered with the United States Environmental Protection Agency, effective December 28, 1998 (40 CFR 761.30(a)(1)(vi)). If equipment has not been tested for PCB content, owners must follow the requirements of the Assumptions for Use (40 CFR 761.2) in order to determine the classification of their electrical equipment. Assumptions for use are summarized as follows:

1. Mineral oil filled equipment containing greater than 3 pounds (1.36 kilograms) of fluid must be assumed to be PCB-Contaminated if the equipment was manufactured prior to July 2, 1979 or if the date of manufacture cannot be established.
2. Units manufactured after July 2, 1979 or fluid filled units containing less than 3 pounds (1.36 kilograms) of fluid may be assumed to be non-PCB.
3. Units containing 1.36 kilograms or more of a fluid other than mineral oil and that were manufactured prior to July 2, 1979 must be assumed to be PCB.

The assumption rules apply only to use. Decisions for disposal of equipment of for clean-up of accidental releases of PCBs must be based on actual PCB content data. Also, this discussion concerns Federal rules only. States or local agencies may have different or more stringent requirements.

When determining PCB content through analytical methods, USEPA requires the accuracy of the test method to be taken into account. "EPA will not consider it to be good judgement to assume that the sample has less than 50 ppm PCB because the experimental error of the procedure overlaps the cut-off point." (Federal Register, Volume 44, No. 106, 5/31/79. P. 31538.)

Through extensive testing and QA/QC procedures over the past twenty years, we have established that our laboratory method has a precision and reproducibility of plus or minus 10%. For these reasons, we have established our limits to be <45 ppm for non-PCB classification, 45-449 ppm for PCB-Contaminated, and ≥450 ppm for PCB. Values reported on S. D. Myers, Inc. test masters and PCB certification sheets are in parts per million by weight (milligrams per kilogram) as required by 40 CFR 761.1(b)(2). "ND" means "none detected", less than 2 mg/kg according to the standard method of analysis, ASTM D-4059.

If we have tested electrical equipment and are supplying labels, care must be taken to affix the proper label to the appropriate unit. Use of PCB labels is required for PCB transformers and other electrical equipment, but there are also other requirements. Refer to 40 CFR 761 Subpart C. Yellow or White labels are required for use on PCB transformers. Use of Orange labels on PCB-Contaminated units and Green labels on non-PCB units is optional, but many of our customers find this practice to be very convenient.

SD MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 930

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-1-CO-01 8:30 AM Unit No. Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer 8003914 HYDRODEC
Sub-Name D-1-CO-01 8:30 AM
Location /

S/N
Mfg.
Unit No.

Gallons 0 High Volt. 0
KVA 0 Low Volt. 0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

S D MYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 **TC# 930**

Customer 8003914 HYDRODEC
Sub-Name D-1-CO-02 9:30 AM
City CANTON, OH
Unit No.
Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

Date Printed 10/27/09

TC# 930

SDMYERS ACTS 412
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-1-CO-02 9:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: A FURAN TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB

SDMYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 930

Customer 8003914 HYDRODEC
Sub-Name D-1-CO-03 10:30 AM
City CANTON, OH
Unit No.
Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER
Manufacture Date		Transformer Class	
Serial No.		Impedence %	0.00
KVA Rating	0	Phase/Cycle	
High Voltage	0	Liquid Type	OIL
Low Voltage	0	Gallons	0
Weight	0	Other Access	

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

Date Printed 10/27/09

TC# 930

S D MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-1-CO-03 10:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THE TEST WAS PERFORMED BY AN OUTSIDE LAB

SDMYERS
ACTS 412
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09

TC# 930

Customer 8003914 HYDRODEC
Sub-Name D-1-CO-04 11:30 AM

City CANTON, OH
Unit No.

Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER
Manufacture Date		Transformer Class	
Serial No.		Impedence %	0.00
KVA Rating	0	Phase/Cycle	
High Voltage	0	Liquid Type	OIL
Low Voltage	0	Gallons	0
Weight	0	Other Access	

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

Customer 8003914 HYDRODEC S/N
Sub-Name D-1-CO-04 11:30 AM Mfg. Gallons 0 High Volt. 0
Location / Unit No. KVA 0 Low Volt. 0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB

SD MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 **TC# 930**

Customer 8003914 HYDRODEC
Sub-Name D-1-CO-05 12:30 PM
City CANTON, OH
Unit No.
Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

S D MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09

TC# 93(

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-1-CO-05 12:30 PM	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09					ND

COLOR LABEL: Green **CLASS:** NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 930

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-1-CO-06 1:30 PM Unit No. Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09

TC# 930

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-1-CO-06 1:30 PM	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 930

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-1-CO-07 2:30 PM Unit No. Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

Date Printed 10/27/09

TC# 930

SDMYERS ACTS 412
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-1-CO-07 2:30 PM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THE TEST WAS PERFORMED BY AN OUTSIDE LAB.

MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 930

Customer 8003914 HYDRODEC
Sub-Name D-1-CO-08 3:30 PM
City CANTON, OH
Unit No.
Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

Date Printed 10/27/09

TC# 930

SDMYERS
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-1-CO-08 3:30 PM	Mfg.	Gallons 0	High Volt. 0	
Location	/	Unit No.	KVA 0	Low Volt. 0	

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

S D MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 **TC# 930**

Customer 8003914 HYDRODEC
Sub-Name D-1-CO-09 4:30 PM
City CANTON, OH
Unit No.
Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

Date Printed 10/27/09

TC# 930

SDMYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-1-CO-09 4:30 PM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

S D MYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 **TC# 930**

Customer 8003914 HYDRODEC
Sub-Name D-1-FE-01 8:30 AM
City CANTON, OH
Unit No.
Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

Date Printed 10/27/09

TC# 930

S D MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-1-FE-01 8:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09			2,023		2,023

COLOR LABEL: Yellow **CLASS:** PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 **TC# 931**

Customer 8003914 HYDRODEC | City CANTON, OH | Location /
Sub-Name D-1-FE-02 9:30 AM | Unit No. | Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

Date Printed 10/27/09

TC# 931

S D MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-1-FE-02 9:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09			2,020		2,020

COLOR LABEL: Yellow **CLASS:** PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SD MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09

TC# 931

Customer 8003914 HYDRODEC
Sub-Name D-1-FE-03 10:30 AM

City CANTON, OH
Unit No.

Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

Date Printed 10/27/09

TC# 931

SDMYERS ACTS 412
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-1-FE-03 10:30 AM	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09			2,073		2,073

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09

TC# 931

Customer 8003914 HYDRODEC
Sub-Name D-1FE-04 11:30 AM

City CANTON, OH
Unit No.

Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC - ACCEPTABLE QU - QUESTIONABLE UN - UNACCEPTABLE

Date Printed 10/27/09

TC# 931

SDMYERS
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-1FE-04 11:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	TEMP	AVG PPM	SATURATION	PCT. MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09			2,143		2,143

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SD MYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09

TC# 931

Customer 8003914 HYDRODEC
Sub-Name D-1-FE-05 12:30 PM

City CANTON, OH
Unit No.

Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

Customer 8003914 HYDRODEC S/N
Sub-Name D-1-FE-05 12:30 PM Mfg. Gallons 0 High Volt. 0
Location / Unit No. KVA 0 Low Volt. 0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09			2,068		2,068

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 931

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-1-FE-06 1:30 PM Unit No. Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

Date Printed 10/27/09

TC# 931

S D MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-1-FE-06 1:30 PM	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09			2,095		2,095

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 **TC# 931**

Customer 8003914 HYDRODEC
Sub-Name D-1-FE-07 2:30 PM
City CANTON, OH
Unit No.
Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

Date Printed 10/27/09

TC# 931

S D MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-1-FE-07 2:30 PM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/20/09			2,126		2,126

COLOR LABEL: Yellow **CLASS:** PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SD MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 931

Customer 8003914 HYDRODEC
Sub-Name D-2-CO-01 8:30 AM
City CANTON, OH
Unit No.
Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer 8003914 HYDRODEC S/N
Sub-Name D-2-CO-01 8:30 AM Mfg. Gallons 0 High Volt. 0
Location / Unit No. KVA 0 Low Volt. 0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/21/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SD MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 931

Customer 8003914 HYDRODEC
Sub-Name D-2-CO-02 9:30 AM
City CANTON, OH
Unit No.
Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 931

SDMYERS ACTS 412
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-2-CO-02 9:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/21/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SD MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 931

Customer 8003914 HYDRODEC
Sub-Name D-2-CO-03 10:30 AM
City CANTON, OH
Unit No.
Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-2-CO-03 10:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/21/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SD MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 931

Customer 8003914 HYDRODEC
Sub-Name D-2-CO-04 11:30 AM
City CANTON, OH
Unit No.
Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 931

SD MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-2-CO-04 11:30 AM	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/21/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SD MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 **TC# 932**

Customer 8003914 HYDRODEC | City CANTON, OH | Location /
Sub-Name D-2-FE-01 8:30 AM | Unit No. | Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 932

S D MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-2-FE-01 8:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/21/09			1,978		1,978

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SD MYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 **TC# 932**

Customer 8003914 HYDRODEC
Sub-Name D-2-FE-02 9:30 AM
City CANTON, OH
Unit No.
Location /
Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE, QU — QUESTIONABLE, UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-2-FE-02 9:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/21/09			1,978		1,978

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

S D MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 932

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-2-FE-03 10:30 AM Unit No. Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER	Radiators	
Manufacture Date		Transformer Class		Fans	
Serial No.		Impedence %	0.00	Water Cooled	
KVA Rating	0	Phase/Cycle		Oil Pumps	
High Voltage	0	Liquid Type	OIL	Top FPV (inch)	0.00
Low Voltage	0	Gallons	0	Bottom FPV (inch)	0.00
Weight	0	Other Access		Insulation Type	

ADDITIONAL EQUIPMENT

Conservator Tank			
LTC Compartment			
Bushing Location			
Breather			
Hose Length (feet)	0		
Service Online			
Power Available			

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 932

ACTS 412
SDMYERS
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-2-FE-03 10:30 AM	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/21/09			2,061		2,061

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SD MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 932

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-2-FE-04 11:30 AM Unit No. Other

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-2-FE-04 11:30 AM	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/21/09			1,988		1,988

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SD MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 932

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-3-CO-01 8:30 AM Unit No. Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-3-CO-01 8:30 AM	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

ACTS 4:12
SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 932

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-3-CO-02 9:30 AM Unit No. Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/27/09

TC# 932

SDMYERS ACTS 412
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-3-CO-02 9:30 AM	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

ACTS 4:12
S D MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 **TC# 932**

Customer	8003914 HYDRODEC	**City**	CANTON, OH	**Location**	/
Sub-Name	D-3-CO-03 10:30 AM	**Unit No.**		**Other**	CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER	Radiators	
Manufacture Date		Transformer Class		Fans	
Serial No.		Impedence %	0.00	Water Cooled	
KVA Rating	0	Phase/Cycle		Oil Pumps	
High Voltage	0	Liquid Type	OIL	Top FPV (inch)	0.00
Low Voltage	0	Gallons	0	Bottom FPV (inch)	0.00
Weight	0	Other Access		Insulation Type	

ADDITIONAL EQUIPMENT

Conservator Tank			
LTC Compartment			
Bushing Location			
Breather			
Hose Length (feet)	0		
Service Online			
Power Available			

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE OU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/27/09

TC# 932

SD MYERS ACTS 412
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-3-CO-03 10:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 932

Customer 8003914 HYDRODEC
Sub-Name D-3-CO-04 11:30 AM
City CANTON, OH
Unit No.
Location /
Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/27/09

TC# 932

SDMYERS ACTS 412
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-3-CO-04 11:30 AM	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 932

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-3-CO-05 12:30 PM Unit No. Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-3-CO-05 12:30 PM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 932

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-3-CO-06 1:30 PM Unit No. Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-3-CO-06 1:30 PM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 933

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-3-FE-01 8:30 AM Unit No. Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-3-FE-01 8:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09			1,925		1,925

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 933

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-3-FE-02 9:30 AM Unit No. Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER	Radiators		Conservator Tank	
Manufacture Date		Transformer Class		Fans		LTC Compartment	
Serial No.		Impedence %	0.00	Water Cooled		Bushing Location	
KVA Rating	0	Phase/Cycle		Oil Pumps		Breather	
High Voltage	0	Liquid Type	OIL	Top FPV (inch)	0.00	Hose Length (feet)	0
Low Voltage	0	Gallons	0	Bottom FPV (inch)	0.00	Service Online	
Weight	0	Other Access		Insulation Type		Power Available	

ADDITIONAL EQUIPMENT

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/27/09

TC# 933

SDMYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-3-FE-02 9:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09			2,088		2,088

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 **TC# 933**

Customer	8003914 HYDRODEC	**City**	CANTON, OH	**Location**	/
Sub-Name	D-3-FE-03 10:30 AM	**Unit No.**		**Other**	FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-3-FE-03 10:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09			2,148		2,148

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

S D MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 933

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-3-FE-04 11:30 AM Unit No. Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-3-FE-04 11:30 AM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09			2,129		2,129

COLOR LABEL: Yellow **CLASS:** PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 **TC# 933**

Customer 8003914 HYDRODEC
Sub-Name D-3-FE-05 12:30 PM
City CANTON, OH
Unit No.
Location /
Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-3-FE-05 12:30 PM	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09			2,048		2,048

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/27/09 TC# 933

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-3-FE-06 1:30 PM Unit No. Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/27/09

TC# 933

S D MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-3-FE-06 1:30 PM	Mfg.	Gallons 0	High Volt. 0	
Location	/	Unit No.	KVA 0	Low Volt. 0	

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09			2,137		2,137

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

S D MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 933

Customer 8003914 HYDRODEC
Sub-Name D-3-CO-07 2:30
City CANTON, OH
Unit No.
Location /
Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-3-CO-07 2:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 **TC#** 933

Customer	8003914 HYDRODEC	**City**	CANTON, OH	**Location**	/
Sub-Name	D-3-CO-09 4:30	**Unit No.**		**Other**	CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-3-CO-09 4:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP

EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green

CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 933

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-4-CO-01 8:30 Unit No. Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 933

SDMYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-4-CO-01 8:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 933

Customer 8003914 HYDRODEC
Sub-Name D-4-CO-02 9:30
City CANTON, OH
Unit No.
Location /
Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer 8003914 HYDRODEC S/N
Sub-Name D-4-CO-02 9:30 Mfg. Gallons 0 High Volt. 0
Location / Unit No. KVA 0 Low Volt. 0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

ACTS 4:12
SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 934

Customer 8003914 HYDRODEC
Sub-Name D-4-CO-03 10:30
City CANTON, OH
Unit No.
Location /
Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

S D MYERS ACTS 412
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 **TC# 934**

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-4-CO-03 10:30	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green **CLASS:** NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 934

Customer 8003914 HYDRODEC
Sub-Name D-4-CO-04 11:30
City CANTON, OH
Unit No.
Location /
Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 934

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-4-CO-04 11:30	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 **TC# 934**

Customer	8003914 HYDRODEC	**City**	CANTON, OH	**Location**	/
Sub-Name	D-4-CO-05 12:30	**Unit No.**		**Other**	CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank			
Fans		LTC Compartment			
Water Cooled		Bushing Location			
Oil Pumps		Breather			
Top FPV (inch)	0.00	Hose Length (feet)	0		
Bottom FPV (inch)	0.00	Service Online			
Insulation Type		Power Available			

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-4-CO-05 12:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 **TC# 934**

Customer	8003914 HYDRODEC	**City**	CANTON, OH	**Location**	/
Sub-Name	D-4-CO-06 13:30	**Unit No.**		**Other**	CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-4-CO-06 13:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 934

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-4-CO-07 14:30 Unit No. Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

S D MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 **TC#** 934

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-4-CO-07 14:30	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green **CLASS:** NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 934

Customer 8003914 HYDRODEC
Sub-Name D-4-CO-08 15:30
City CANTON, OH
Unit No.
Location /
Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER	Radiators	
Manufacture Date		Transformer Class		Fans	
Serial No.		Impedence %	0.00	Water Cooled	
KVA Rating	0	Phase/Cycle		Oil Pumps	
High Voltage	0	Liquid Type	OIL	Top FPV (inch)	0.00
Low Voltage	0	Gallons	0	Bottom FPV (inch)	0.00
Weight	0	Other Access		Insulation Type	

ADDITIONAL EQUIPMENT

Conservator Tank			
LTC Compartment			
Bushing Location			
Breather			
Hose Length (feet)	0		
Service Online			
Power Available			

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-4-CO-08 15:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09					ND
10/23/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 934

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-4-CO-09 16:30 Unit No. Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER	Radiators		Conservator Tank	
Manufacture Date		Transformer Class		Fans		LTC Compartment	
Serial No.		Impedence %	0.00	Water Cooled		Bushing Location	
KVA Rating	0	Phase/Cycle		Oil Pumps		Breather	
High Voltage	0	Liquid Type	OIL	Top FPV (inch)	0.00	Hose Length (feet)	0
Low Voltage	0	Gallons	0	Bottom FPV (inch)	0.00	Service Online	
Weight	0	Other Access		Insulation Type		Power Available	

ADDITIONAL EQUIPMENT

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-4-CO-09 16:30	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 **TC# 934**

Customer 8003914 HYDRODEC
Sub-Name D-4-CO-10 17:30
City CANTON, OH
Unit No.
Location /
Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER
Manufacture Date		Transformer Class	
Serial No.		Impedence %	0.00
KVA Rating	0	Phase/Cycle	
High Voltage	0	Liquid Type	OIL
Low Voltage	0	Gallons	0
Weight	0	Other Access	

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 934

THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-4-CO-10 17:30	Mfg.	Gallons 0	High Volt. 0	
Location	/	Unit No.	KVA 0	Low Volt. 0	

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 934

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-4-CP-11 18:30 Unit No. Other CLEAN OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 934

ACTS 412
S D MYERS
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-4-CP-11 18:30	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP

EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green

CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 **TC# 934**

Customer 8003914 HYDRODEC
Sub-Name D-3-FE-07 2:30
City CANTON, OH
Unit No.
Location /
Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-3-FE-07 2:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SD MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 **TC# 935**

Customer 8003914 HYDRODEC
Sub-Name D-4-FE-01 8:30
City CANTON, OH
Unit No.
Location /
Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-4-FE-01 8:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09			1,951		1,951

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 935

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-4-FE-02 9:30 Unit No. Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 935

SD MYERS ACTS 412
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-4-FE-02 9:30	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09			1,964		1,964

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 935

Customer 8003914 HYDRODEC
Sub-Name D-4-FE-03 10:30
City CANTON, OH
Unit No.
Location /
Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-4-FE-03 10:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09			2,014		2,014

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 **TC# 935**

Customer 8003914 HYDRODEC
Sub-Name D-4-FE-04 11:30
City CANTON, OH
Unit No.
Location /
Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 935

SD MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-4-FE-04 11:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP

EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09			1,986		1,986

COLOR LABEL: Yellow

CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 **TC#** 935

Customer	8003914 HYDRODEC	**City**	CANTON, OH	**Location**	/
Sub-Name	D-4-FE-05 12:30	**Unit No.**		**Other**	FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER	Radiators	
Manufacture Date		Transformer Class		Fans	
Serial No.		Impedence %	0.00	Water Cooled	
KVA Rating	0	Phase/Cycle		Oil Pumps	
High Voltage	0	Liquid Type	OIL	Top FPV (inch)	0.00
Low Voltage	0	Gallons	0	Bottom FPV (inch)	0.00
Weight	0	Other Access		Insulation Type	

ADDITIONAL EQUIPMENT

Conservator Tank			
LTC Compartment			
Bushing Location			
Breather			
Hose Length (feet)	0		
Service Online			
Power Available			

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 935

SDMYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-4-FE-05 12:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09			1,972		1,972

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SD MYERS
ACTS 412
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 935

Customer 8003914 HYDRODEC
Sub-Name D-4-FE-06 13:30
City CANTON, OH
Unit No.
Location /
Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 935

SDMYERS ACTS 412
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-4-FE-06 13:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/22/09			2,015		2,015
10/23/09			1,948		1,948

COLOR LABEL: Yellow **CLASS:** PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

S D MYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 935

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-4-FE-07 14:30 Unit No. Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 935

ACTS 4:12
SDMYERS
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-4-FE-07 14:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09			1,886		1,886

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
ACTS 4:12
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 935

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-4-FE:08 15:30 Unit No. Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 935

SDMYERS
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N			
Sub-Name	D-4-FE:08 15:30	Mfg.	Gallons 0	High Volt.	0
Location	/	Unit No.	KVA 0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09			1,944		1,944

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
ACTS 412
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 935

Customer 8003914 HYDRODEC City CANTON, OH Location /
Sub-Name D-4-FE-09 16:30 Unit No. Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

S.D. MYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09

TC# 935

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-4-FE-09 16:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09			1,961		1,961

COLOR LABEL: Yellow CLASS: PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 TC# 935

Customer 8003914 HYDRODEC
Sub-Name D-4-FE-10 17:30
City CANTON, OH
Unit No.
Location /
Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER
Manufacture Date		Transformer Class	
Serial No.		Impedence %	0.00
KVA Rating	0	Phase/Cycle	
High Voltage	0	Liquid Type	OIL
Low Voltage	0	Gallons	0
Weight	0	Other Access	

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-4-FE-10 17:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09			22		22

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

SDMYERS
THE TRANSFORMER CONSULTANTS

Date Printed 10/30/09 **TC# 936**

Customer 8003914 HYDRODEC
Sub-Name D-4-FE-11 18:30
City CANTON, OH
Unit No.
Location /
Other FEED OIL

NAMEPLATE DATA

Manufacturer		Equipment Type	TRANSFORMER		
Manufacture Date		Transformer Class			
Serial No.		Impedence %	0.00		
KVA Rating	0	Phase/Cycle			
High Voltage	0	Liquid Type	OIL		
Low Voltage	0	Gallons	0		
Weight	0	Other Access			

ADDITIONAL EQUIPMENT

Radiators		Conservator Tank	
Fans		LTC Compartment	
Water Cooled		Bushing Location	
Oil Pumps		Breather	
Top FPV (inch)	0.00	Hose Length (feet)	0
Bottom FPV (inch)	0.00	Service Online	
Insulation Type		Power Available	

VISUAL INSPECTION

DATE	LEVEL	SAMPLE TEMP	TOP TEMP	P/V	PAINT	LEAKS

FIELD SERVICE

DATE	SERVICE

Additional Information

Reason Not Tested

LIQUID SCREEN TEST DATA

DATE	SERVICE	ACID	IFT	DIEL 877	DIEL 1816	GAP	COLOR	SP. GRAV.	VISUAL	SEDIMENT

INHIBITOR CONTENT

DATE	PCT. BY WEIGHT

NOTE - TESTING FOR INHIBITOR CONTENT TEST IS USEFUL, SINCE INHIBITOR SLOWS THE AGING RATE OF THE TRANSFORMER'S INSULATION SYSTEM

LIQUID POWER FACTOR

DATE	25 C	100 C

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

KEY TO ABBREVIATIONS: AC — ACCEPTABLE QU — QUESTIONABLE UN — UNACCEPTABLE

Date Printed 10/30/09

TC# 936

S D MYERS ACTS 4:12
THE TRANSFORMER CONSULTANTS

Customer	8003914 HYDRODEC	S/N					
Sub-Name	D-4-FE-11 18:30	Mfg.		Gallons	0	High Volt.	0
Location	/	Unit No.		KVA	0	Low Volt.	0

KARL FISCHER TESTING MOISTURE CONTENT EXPRESSED IN PPM

DATE	AVG TEMP	PPM	PCT. SATURATION	MOIST./DRY WGT. PCT.	GRADE

RECOMMENDATION

FURAN ANALYSIS EXPRESSED IN PPB

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

RECOMMENDATION

CALCULATED DP EST. LIFE REMAINING

GAS-IN-OIL ANALYSIS GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLEN	TOTAL COMBUST.	TOTAL GAS

RECOMMENDATION

ICP METALS-IN-OIL EXPRESSED IN PPM

DATE	ALUMINUM	IRON	COPPER

RECOMMENDATION

PCB CONTENT EXPRESSED IN PPM

DATE	1242	1254	1260	OTHER	TOTAL
10/23/09					ND

COLOR LABEL: Green CLASS: NON-PCB

Results in mg/kg
ND means "none detected"
(< 2 mg/kg per ASTM D4059)

NOTE: * AFTER A TEST RESULT INDICATES THAT THIS TEST WAS PERFORMED BY AN OUTSIDE LAB.

Appendix F

Test America Analytical Data (PCB)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PCB TRIAL

Lot #: A9J280262

Joseph Devirgilio

Hydrodec North America Inc.
2021 Steinway Boulevard SE
Canton, OH 44707

TESTAMERICA LABORATORIES, INC.

Approved for release.
Billy Blake
Project Manager
11/16/2009 12:48 PM

Billy Blake
Project Manager
billy.blake@testamericainc.com

November 13, 2009

CASE NARRATIVE

A9J280262

The following report contains the analytical results for eleven waste samples and one quality control sample submitted to TestAmerica North Canton by Hydrodec North America Inc. from the PCB TRIAL Site. The samples were received October 28, 2009, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Joseph Devirgilio on November 10, 2009. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the reporting limit.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Billy Blake, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

Due to a sample receiving oversight the cooler temperatures were not recorded on the cooler receipt form provided with this data package. The check boxes for the method used (IR) and coolant (wet ice) were marked indicating that the temperature was measured. The project was not flagged for a high temperature indicating the cooler was within the 4 degree (+/- 2 degrees) Celsius range.

POLYCHLORINATED BIPHENYLS-8082

There were no client requested Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples in batch(es) 9302045. Therefore, the laboratory has included a Laboratory Control Sample Duplicate (LCSD) in the QC batch. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

TestAmerica Certifications and Approvals:

The laboratory is certified for the analytes listed on the documents below. These are available upon request.

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),
Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada (#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit

EXECUTIVE SUMMARY - Detection Highlights

A9J280262

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
D-1-FE-COMP 10/20/09 003				
PCB-1260	1500000	200000	ug/kg	SW846 8082
D-2-FE-COMP 10/21/09 006				
PCB-1260	1600000	200000	ug/kg	SW846 8082
D-3-FE-COMP 10/22/09 008				
PCB-1260	1700000	200000	ug/kg	SW846 8082
D-4-FE-COMP 10/23/09 010				
PCB-1260	1800000	200000	ug/kg	SW846 8082

ANALYTICAL METHODS SUMMARY

A9J280262

PARAMETER	ANALYTICAL METHOD
PCBs by SW-846 8082	SW846 8082

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A9J280262

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMI TIMI
LNE84	001	D-1-CO-COMPR	10/20/09	
LNFCT	002	D-1-CO-COMP	10/20/09	
LNFCV	003	D-1-FE-COMP	10/20/09	
LNFC0	004	D-2-CO-COMPR	10/22/09	
LNFC3	005	D-2-CO-COMP	10/21/09	
LNFC5	006	D-2-FE-COMP	10/21/09	
LNFC6	007	D-3-CO-COMP	10/22/09	
LNFC9	008	D-3-FE-COMP	10/22/09	
LNFDC	009	D-4-CO-COMP	10/23/09	
LNFDD	010	D-4-FE-COMP	10/23/09	
LNFDE	011	TRIP BLANK	10/23/09	
LNFDJ	012	C001B	10/23/09	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Hydrodec North America Inc.

Client Sample ID: D-1-CO-COMPR

GC Semivolatiles

Lot-Sample #...: A9J280262-001 **Work Order #...:** LNE841AA **Matrix.....:** LO
Date Sampled...: 10/20/09 **Date Received..:** 10/28/09
Prep Date.....: 10/29/09 **Analysis Date..:** 11/04/09
Prep Batch #...: 9302045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
PCB-1016	ND	1000	ug/kg
PCB-1221	ND	1000	ug/kg
PCB-1232	ND	1000	ug/kg
PCB-1242	ND	1000	ug/kg
PCB-1248	ND	1000	ug/kg
PCB-1254	ND	1000	ug/kg
PCB-1260	ND	1000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	63	(10 - 196)
Decachlorobiphenyl	63	(10 - 199)

Hydrodec North America Inc.

Client Sample ID: D-1-CO-COMP

GC Semivolatiles

Lot-Sample #...: A9J280262-002 **Work Order #...:** LNFCT1AA **Matrix.....:** LO
Date Sampled...: 10/20/09 **Date Received..:** 10/28/09
Prep Date.....: 10/29/09 **Analysis Date..:** 11/04/09
Prep Batch #...: 9302045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
PCB-1016	ND	1000	ug/kg
PCB-1221	ND	1000	ug/kg
PCB-1232	ND	1000	ug/kg
PCB-1242	ND	1000	ug/kg
PCB-1248	ND	1000	ug/kg
PCB-1254	ND	1000	ug/kg
PCB-1260	ND	1000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	57	(10 - 196)
Decachlorobiphenyl	64	(10 - 199)

Hydrodec North America Inc.

Client Sample ID: D-1-FE-COMP

GC Semivolatiles

Lot-Sample #...: A9J280262-003 **Work Order #...:** LNFCV1AA **Matrix.....:** LO
Date Sampled...: 10/20/09 **Date Received..:** 10/28/09
Prep Date.....: 10/29/09 **Analysis Date..:** 11/04/09
Prep Batch #...: 9302045
Dilution Factor: 200
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
PCB-1016	ND	200000	ug/kg
PCB-1221	ND	200000	ug/kg
PCB-1232	ND	200000	ug/kg
PCB-1242	ND	200000	ug/kg
PCB-1248	ND	200000	ug/kg
PCB-1254	ND	200000	ug/kg
PCB-1260	**1500000**	**200000**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	160 DIL	(10 - 196)
Decachlorobiphenyl	444 DIL,*	(10 - 199)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Hydrodec North America Inc.

Client Sample ID: D-2-CO-COMPR

GC Semivolatiles

Lot-Sample #...: A9J280262-004 **Work Order #...:** LNFC01AA **Matrix.....:** LO
Date Sampled...: 10/22/09 **Date Received..:** 10/28/09
Prep Date.....: 10/29/09 **Analysis Date..:** 11/04/09
Prep Batch #...: 9302045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
PCB-1016	ND	1000	ug/kg
PCB-1221	ND	1000	ug/kg
PCB-1232	ND	1000	ug/kg
PCB-1242	ND	1000	ug/kg
PCB-1248	ND	1000	ug/kg
PCB-1254	ND	1000	ug/kg
PCB-1260	ND	1000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	58	(10 - 196)
Decachlorobiphenyl	68	(10 - 199)

Hydrodec North America Inc.

Client Sample ID: D-2-CO-COMP

GC Semivolatiles

Lot-Sample #...: A9J280262-005 **Work Order #...:** LNFC31AA **Matrix.....:** LO
Date Sampled...: 10/21/09 **Date Received..:** 10/28/09
Prep Date.....: 10/29/09 **Analysis Date..:** 11/04/09
Prep Batch #...: 9302045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
PCB-1016	ND	1000	ug/kg
PCB-1221	ND	1000	ug/kg
PCB-1232	ND	1000	ug/kg
PCB-1242	ND	1000	ug/kg
PCB-1248	ND	1000	ug/kg
PCB-1254	ND	1000	ug/kg
PCB-1260	ND	1000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	56	(10 - 196)
Decachlorobiphenyl	67	(10 - 199)

Hydrodec North America Inc.

Client Sample ID: D-2-FE-COMP

GC Semivolatiles

Lot-Sample #...: A9J280262-006	**Work Order #...:** LNFC51AA		**Matrix.....:** LO
Date Sampled...: 10/21/09	**Date Received..:** 10/28/09		
Prep Date.....: 10/29/09	**Analysis Date..:** 11/04/09		
Prep Batch #...: 9302045			
Dilution Factor: 200			
% Moisture.....:	**Method.....:** SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
PCB-1016	ND	200000	ug/kg
PCB-1221	ND	200000	ug/kg
PCB-1232	ND	200000	ug/kg
PCB-1242	ND	200000	ug/kg
PCB-1248	ND	200000	ug/kg
PCB-1254	ND	200000	ug/kg
PCB-1260	**1600000**	**200000**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	138 DIL	(10 - 196)
Decachlorobiphenyl	356 DIL,*	(10 - 199)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Hydrodec North America Inc.

Client Sample ID: D-3-CO-COMP

GC Semivolatiles

Lot-Sample #...: A9J280262-007 **Work Order #...:** LNFC61AA **Matrix.....:** LO
Date Sampled...: 10/22/09 **Date Received..:** 10/28/09
Prep Date.....: 10/29/09 **Analysis Date..:** 11/04/09
Prep Batch #...: 9302045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
PCB-1016	ND	1000	ug/kg
PCB-1221	ND	1000	ug/kg
PCB-1232	ND	1000	ug/kg
PCB-1242	ND	1000	ug/kg
PCB-1248	ND	1000	ug/kg
PCB-1254	ND	1000	ug/kg
PCB-1260	ND	1000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	58	(10 - 196)
Decachlorobiphenyl	70	(10 - 199)

Hydrodec North America Inc.

Client Sample ID: D-3-FE-COMP

GC Semivolatiles

Lot-Sample #...: A9J280262-008 **Work Order #...:** LNFC91AA **Matrix.....:** LO
Date Sampled...: 10/22/09 **Date Received..:** 10/28/09
Prep Date.....: 10/29/09 **Analysis Date..:** 11/04/09
Prep Batch #...: 9302045
Dilution Factor: 200
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
PCB-1016	ND	200000	ug/kg
PCB-1221	ND	200000	ug/kg
PCB-1232	ND	200000	ug/kg
PCB-1242	ND	200000	ug/kg
PCB-1248	ND	200000	ug/kg
PCB-1254	ND	200000	ug/kg
PCB-1260	**1700000**	**200000**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	147 DIL	(10 - 196)
Decachlorobiphenyl	259 DIL,*	(10 - 199)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Hydrodec North America Inc.

Client Sample ID: D-4-CO-COMP

GC Semivolatiles

Lot-Sample #...: A9J280262-009 **Work Order #...:** LNFDC1AA **Matrix.....:** LO
Date Sampled...: 10/23/09 **Date Received..:** 10/28/09
Prep Date.....: 10/29/09 **Analysis Date..:** 11/04/09
Prep Batch #...: 9302045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
PCB-1016	ND	1000	ug/kg
PCB-1221	ND	1000	ug/kg
PCB-1232	ND	1000	ug/kg
PCB-1242	ND	1000	ug/kg
PCB-1248	ND	1000	ug/kg
PCB-1254	ND	1000	ug/kg
PCB-1260	ND	1000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	31	(10 - 196)
Decachlorobiphenyl	83	(10 - 199)

Hydrodec North America Inc.

Client Sample ID: D-4-FE-COMP

GC Semivolatiles

Lot-Sample #...: A9J280262-010 **Work Order #...:** LNFDD1AA **Matrix.....:** LO
Date Sampled...: 10/23/09 **Date Received..:** 10/28/09
Prep Date.....: 10/29/09 **Analysis Date..:** 11/04/09
Prep Batch #...: 9302045
Dilution Factor: 200
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
PCB-1016	ND	200000	ug/kg
PCB-1221	ND	200000	ug/kg
PCB-1232	ND	200000	ug/kg
PCB-1242	ND	200000	ug/kg
PCB-1248	ND	200000	ug/kg
PCB-1254	ND	200000	ug/kg
PCB-1260	**1800000**	**200000**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	143 DIL	(10 - 196)
Decachlorobiphenyl	295 DIL,*	(10 - 199)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Hydrodec North America Inc.

Client Sample ID: TRIP BLANK

GC Semivolatiles

Lot-Sample #...: A9J280262-011 **Work Order #...:** LNFDE1AA **Matrix.....:** SW
Date Sampled...: 10/23/09 **Date Received..:** 10/28/09
Prep Date.....: 10/30/09 **Analysis Date..:** 10/30/09
Prep Batch #...: 9303039
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
PCB-1016	ND	4.0	ug
PCB-1221	ND	4.0	ug
PCB-1232	ND	4.0	ug
PCB-1242	ND	4.0	ug
PCB-1248	ND	4.0	ug
PCB-1254	ND	4.0	ug
PCB-1260	ND	4.0	ug

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	136	(10 - 196)
Decachlorobiphenyl	139	(10 - 199)

Hydrodec North America Inc.

Client Sample ID: C001B

GC Semivolatiles

Lot-Sample #...: A9J280262-012 **Work Order #...:** LNFDJ1AA **Matrix.....:** LO
Date Sampled...: 10/23/09 **Date Received..:** 10/28/09
Prep Date.....: 10/29/09 **Analysis Date..:** 11/04/09
Prep Batch #...: 9302045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
PCB-1016	ND	1000	ug/kg
PCB-1221	ND	1000	ug/kg
PCB-1232	ND	1000	ug/kg
PCB-1242	ND	1000	ug/kg
PCB-1248	ND	1000	ug/kg
PCB-1254	ND	1000	ug/kg
PCB-1260	ND	1000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	62	(10 - 196)
Decachlorobiphenyl	74	(10 - 199)

Appendix G

Test America Analytical (Dioxins/Furans)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PCB TRIAL

Lot #: A9K020442

Joseph Devirgilio

Hydrodec North America Inc.
2021 Steinway Boulevard SE
Canton, OH 44707

TESTAMERICA LABORATORIES, INC.

Denise Pohl

Approved for release.
Denise Pohl
Project Manager
12/4/2009 3:42 PM

Denise Pohl
Project Manager
denise.pohl@testamericainc.com

December 4, 2009

ACCREDITED IN ACCORDANCE WITH nelac

CASE NARRATIVE

A9K020442

The following report contains the analytical results for ten waste samples submitted to TestAmerica North Canton by Hydrodec North America Inc. from the PCB Trial Site. The samples were received October 28, 2009, according to documented sample acceptance procedures.

The Dioxin analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Joseph Devirgilio on November 30, 2009. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the reporting limit.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Denise Pohl, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

Due to a sample receiving oversight the cooler temperatures were not recorded on the cooler receipt form provided with this data package. The check boxes for the method used (IR) and coolant (wet ice) were marked indicating that the temperature was measured. The project was not flagged for a high temperature indicating the cooler was within the 4 degree (+/- 2 degrees) Celsius range.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

TestAmerica Certifications and Approvals:

The laboratory is certified for the analytes listed on the documents below. These are available upon request.
California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),
Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada (#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit

Case Narrative

TestAmerica West Sacramento Project Number A9K020442

WASTE, 8280A, Dioxins/Furans
Sample(s): 4
The 2,3,7,8-TCDD detection limit was elevated for this sample due to elevated noise or matrix interferences.

There were no other anomalies associated with this project.

EXECUTIVE SUMMARY - Detection Highlights

A9K020442

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
NO DETECTABLE PARAMETERS				

ANALYTICAL METHODS SUMMARY

A9K020442

PARAMETER	ANALYTICAL METHOD
Dioxins/Furans, HRGC/LRMS (8280A)	SW846 8280A

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A9K020442

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LNN0H	001	D-1-CO-COMPR	10/20/09	
LNN0M	002	D-1-CO-COMP	10/20/09	
LNN0N	003	D-1-FE-COMP	10/20/09	
LNN0Q	004	D-2-CO-COMPR	10/22/09	
LNN0R	005	D-2-CO-COMP	10/21/09	
LNN0W	006	D-2-FE-COMP	10/21/09	
LNN00	007	D-3-CO-COMP	10/22/09	
LNN01	008	D-3-FE-COMP	10/22/09	
LNN02	009	D-4-CO-COMP	10/23/09	
LNN03	010	D-4-FE-COMP	10/23/09	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Hydrodec North America Inc.

Client Sample ID: D-1-CO-COMPR

Trace Level Organic Compounds

Lot-Sample #...: A9K020442-001 **Work Order #...:** LNN0H1AA **Matrix.....:** LO
Date Sampled...: 10/20/09 **Date Received..:** 10/28/09
Prep Date.....: 11/18/09 **Analysis Date..:** 11/21/09
Prep Batch #...: 9316226
Dilution Factor: 1
% Moisture.....:

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	6.5	ng/g	SW846 8280A
Total TCDD	ND	33	ng/g	SW846 8280A
1,2,3,7,8-PeCDD	ND	6.6	ng/g	SW846 8280A
Total PeCDD	ND	10	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDD	ND	7.5	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDD	ND	7.6	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDD	ND	4.9	ng/g	SW846 8280A
Total HxCDD	ND	10	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDD	ND	5.7	ng/g	SW846 8280A
Total HpCDD	ND	12	ng/g	SW846 8280A
OCDD	ND	5.7	ng/g	SW846 8280A
2,3,7,8-TCDF	ND	0.86	ng/g	SW846 8280A
Total TCDF	ND	3.8	ng/g	SW846 8280A
1,2,3,7,8-PeCDF	ND	4.9	ng/g	SW846 8280A
2,3,4,7,8-PeCDF	ND	3.9	ng/g	SW846 8280A
Total PeCDF	ND	6.3	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDF	ND	3.3	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDF	ND	3.5	ng/g	SW846 8280A
2,3,4,6,7,8-HxCDF	ND	4.2	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDF	ND	3.4	ng/g	SW846 8280A
Total HxCDF	ND	5.3	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDF	ND	4.5	ng/g	SW846 8280A
1,2,3,4,7,8,9-HpCDF	ND	6.5	ng/g	SW846 8280A
Total HpCDF	ND	7.7	ng/g	SW846 8280A
OCDF	ND	5.6	ng/g	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	74	(25 - 150)
13C-2,3,7,8-TCDF	80	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	79	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	81	(25 - 150)
13C-OCDD	70	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	79	(25 - 150)

Hydrodec North America Inc.

Client Sample ID: D-1-CO-COMP

Trace Level Organic Compounds

Lot-Sample #...: A9K020442-002 **Work Order #...:** LNN0M1AA **Matrix.....:** LO
Date Sampled...: 10/20/09 **Date Received..:** 10/28/09
Prep Date.....: 11/18/09 **Analysis Date..:** 11/21/09
Prep Batch #...: 9316226
Dilution Factor: 1
% Moisture.....:

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	5.5	ng/g	SW846 8280A
Total TCDD	ND	42	ng/g	SW846 8280A
1,2,3,7,8-PeCDD	ND	4.8	ng/g	SW846 8280A
Total PeCDD	ND	7.4	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDD	ND	6.4	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDD	ND	6.5	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDD	ND	5.6	ng/g	SW846 8280A
Total HxCDD	ND	8.1	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDD	ND	9.5	ng/g	SW846 8280A
Total HpCDD	ND	12	ng/g	SW846 8280A
OCDD	ND	5.3	ng/g	SW846 8280A
2,3,7,8-TCDF	ND	3.1	ng/g	SW846 8280A
Total TCDF	ND	4.3	ng/g	SW846 8280A
1,2,3,7,8-PeCDF	ND	4.8	ng/g	SW846 8280A
2,3,4,7,8-PeCDF	ND	3.4	ng/g	SW846 8280A
Total PeCDF	ND	17	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDF	ND	2.8	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDF	ND	3.7	ng/g	SW846 8280A
2,3,4,6,7,8-HxCDF	ND	5.2	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDF	ND	3.7	ng/g	SW846 8280A
Total HxCDF	ND	5.5	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDF	ND	4.3	ng/g	SW846 8280A
1,2,3,4,7,8,9-HpCDF	ND	6.1	ng/g	SW846 8280A
Total HpCDF	ND	6.3	ng/g	SW846 8280A
OCDF	ND	6.4	ng/g	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	85	(25 - 150)
13C-2,3,7,8-TCDF	89	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	80	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	83	(25 - 150)
13C-OCDD	77	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	81	(25 - 150)

Hydrodec North America Inc.

Client Sample ID: D-1-FE-COMP

Trace Level Organic Compounds

Lot-Sample #...: A9K020442-003 **Work Order #...:** LNN0N1AA **Matrix.....:** LO
Date Sampled...: 10/20/09 **Date Received..:** 10/28/09
Prep Date.....: 11/18/09 **Analysis Date..:** 11/21/09
Prep Batch #...: 9316226
Dilution Factor: 1
% Moisture.....:

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	2.2	ng/g	SW846 8280A
Total TCDD	ND	31	ng/g	SW846 8280A
1,2,3,7,8-PeCDD	ND	3.2	ng/g	SW846 8280A
Total PeCDD	ND	5.8	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDD	ND	4.6	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDD	ND	5.1	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDD	ND	3.6	ng/g	SW846 8280A
Total HxCDD	ND	5.5	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDD	ND	4.6	ng/g	SW846 8280A
Total HpCDD	ND	7.1	ng/g	SW846 8280A
OCDD	ND	4.2	ng/g	SW846 8280A
2,3,7,8-TCDF	ND	1.7	ng/g	SW846 8280A
Total TCDF	ND	2.5	ng/g	SW846 8280A
1,2,3,7,8-PeCDF	ND	2.4	ng/g	SW846 8280A
2,3,4,7,8-PeCDF	ND	2.1	ng/g	SW846 8280A
Total PeCDF	ND	2.4	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDF	ND	6.4	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDF	ND	2.7	ng/g	SW846 8280A
2,3,4,6,7,8-HxCDF	ND	1.7	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDF	ND	1.9	ng/g	SW846 8280A
Total HxCDF	ND	6.4	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDF	ND	3.8	ng/g	SW846 8280A
1,2,3,4,7,8,9-HpCDF	ND	3.6	ng/g	SW846 8280A
Total HpCDF	ND	4.2	ng/g	SW846 8280A
OCDF	ND	9.0	ng/g	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	78	(25 - 150)
13C-2,3,7,8-TCDF	77	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	74	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	75	(25 - 150)
13C-OCDD	74	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	72	(25 - 150)

Hydrodec North America Inc.

Client Sample ID: D-2-CO-COMPR

Trace Level Organic Compounds

Lot-Sample #...: A9K020442-004 **Work Order #...:** LNN0Q1AA **Matrix.....:** LO
Date Sampled...: 10/22/09 **Date Received..:** 10/28/09
Prep Date.....: 11/18/09 **Analysis Date..:** 11/21/09
Prep Batch #...: 9316226
Dilution Factor: 1
% Moisture.....:

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	13	ng/g	SW846 8280A
Total TCDD	ND G	50	ng/g	SW846 8280A
1,2,3,7,8-PeCDD	ND	15	ng/g	SW846 8280A
Total PeCDD	ND	15	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDD	ND	14	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDD	ND	12	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDD	ND	9.2	ng/g	SW846 8280A
Total HxCDD	ND	19	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDD	ND	19	ng/g	SW846 8280A
Total HpCDD	ND	20	ng/g	SW846 8280A
OCDD	ND	8.9	ng/g	SW846 8280A
2,3,7,8-TCDF	ND	8.6	ng/g	SW846 8280A
Total TCDF	ND	8.6	ng/g	SW846 8280A
1,2,3,7,8-PeCDF	ND	9.7	ng/g	SW846 8280A
2,3,4,7,8-PeCDF	ND	6.6	ng/g	SW846 8280A
Total PeCDF	ND	9.0	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDF	ND	5.6	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDF	ND	5.4	ng/g	SW846 8280A
2,3,4,6,7,8-HxCDF	ND	5.2	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDF	ND	4.5	ng/g	SW846 8280A
Total HxCDF	ND	9.6	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDF	ND	8.0	ng/g	SW846 8280A
1,2,3,4,7,8,9-HpCDF	ND	9.0	ng/g	SW846 8280A
Total HpCDF	ND	11	ng/g	SW846 8280A
OCDF	ND	8.8	ng/g	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	77	(25 - 150)
13C-2,3,7,8-TCDF	79	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	75	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	77	(25 - 150)
13C-OCDD	68	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	81	(25 - 150)

NOTE(S):

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

Hydrodec North America Inc.

Client Sample ID: D-2-CO-COMP

Trace Level Organic Compounds

Lot-Sample #...: A9K020442-005 **Work Order #...:** LNN0R1AA **Matrix.....:** LO
Date Sampled...: 10/21/09 **Date Received..:** 10/28/09
Prep Date.....: 11/18/09 **Analysis Date..:** 11/21/09
Prep Batch #...: 9316226
Dilution Factor: 1
% Moisture.....:

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	4.5	ng/g	SW846 8280A
Total TCDD	ND	34	ng/g	SW846 8280A
1,2,3,7,8-PeCDD	ND	6.1	ng/g	SW846 8280A
Total PeCDD	ND	8.0	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDD	ND	4.3	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDD	ND	4.4	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDD	ND	4.9	ng/g	SW846 8280A
Total HxCDD	ND	6.7	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDD	ND	6.9	ng/g	SW846 8280A
Total HpCDD	ND	10	ng/g	SW846 8280A
OCDD	ND	4.9	ng/g	SW846 8280A
2,3,7,8-TCDF	ND	2.7	ng/g	SW846 8280A
Total TCDF	ND	4.1	ng/g	SW846 8280A
1,2,3,7,8-PeCDF	ND	4.4	ng/g	SW846 8280A
2,3,4,7,8-PeCDF	ND	5.2	ng/g	SW846 8280A
Total PeCDF	ND	6.9	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDF	ND	3.4	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDF	ND	3.0	ng/g	SW846 8280A
2,3,4,6,7,8-HxCDF	ND	3.5	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDF	ND	3.4	ng/g	SW846 8280A
Total HxCDF	ND	5.2	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDF	ND	3.4	ng/g	SW846 8280A
1,2,3,4,7,8,9-HpCDF	ND	5.0	ng/g	SW846 8280A
Total HpCDF	ND	5.8	ng/g	SW846 8280A
OCDF	ND	6.6	ng/g	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	82	(25 - 150)
13C-2,3,7,8-TCDF	86	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	83	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	84	(25 - 150)
13C-OCDD	78	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	79	(25 - 150)

Hydrodec North America Inc.

Client Sample ID: D-2-FE-COMP

Trace Level Organic Compounds

Lot-Sample #...: A9K020442-006 **Work Order #...:** LNN0W1AA **Matrix.....:** LO
Date Sampled...: 10/21/09 **Date Received..:** 10/28/09
Prep Date.....: 11/18/09 **Analysis Date..:** 11/21/09
Prep Batch #...: 9316226
Dilution Factor: 1
% Moisture.....:

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	2.7	ng/g	SW846 8280A
Total TCDD	ND	31	ng/g	SW846 8280A
1,2,3,7,8-PeCDD	ND	3.8	ng/g	SW846 8280A
Total PeCDD	ND	6.5	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDD	ND	5.0	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDD	ND	5.3	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDD	ND	4.3	ng/g	SW846 8280A
Total HxCDD	ND	6.7	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDD	ND	6.4	ng/g	SW846 8280A
Total HpCDD	ND	12	ng/g	SW846 8280A
OCDD	ND	6.4	ng/g	SW846 8280A
2,3,7,8-TCDF	ND	1.4	ng/g	SW846 8280A
Total TCDF	ND	3.7	ng/g	SW846 8280A
1,2,3,7,8-PeCDF	ND	4.3	ng/g	SW846 8280A
2,3,4,7,8-PeCDF	ND	3.0	ng/g	SW846 8280A
Total PeCDF	ND	6.7	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDF	ND	8.4	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDF	ND	4.7	ng/g	SW846 8280A
2,3,4,6,7,8-HxCDF	ND	3.5	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDF	ND	2.6	ng/g	SW846 8280A
Total HxCDF	ND	8.4	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDF	ND	4.6	ng/g	SW846 8280A
1,2,3,4,7,8,9-HpCDF	ND	5.3	ng/g	SW846 8280A
Total HpCDF	ND	5.3	ng/g	SW846 8280A
OCDF	ND	9.1	ng/g	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	64	(25 - 150)
13C-2,3,7,8-TCDF	64	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	64	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	66	(25 - 150)
13C-OCDD	61	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	64	(25 - 150)

Hydrodec North America Inc.

Client Sample ID: D-3-CO-COMP

Trace Level Organic Compounds

Lot-Sample #...: A9K020442-007 **Work Order #...:** LNN001AA **Matrix.....:** LO
Date Sampled...: 10/22/09 **Date Received..:** 10/28/09
Prep Date.....: 11/18/09 **Analysis Date..:** 11/21/09
Prep Batch #...: 9316226
Dilution Factor: 1
% Moisture.....:

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	5.0	ng/g	SW846 8280A
Total TCDD	ND	34	ng/g	SW846 8280A
1,2,3,7,8-PeCDD	ND	4.9	ng/g	SW846 8280A
Total PeCDD	ND	10	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDD	ND	6.8	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDD	ND	6.8	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDD	ND	8.4	ng/g	SW846 8280A
Total HxCDD	ND	9.7	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDD	ND	9.2	ng/g	SW846 8280A
Total HpCDD	ND	11	ng/g	SW846 8280A
OCDD	ND	6.7	ng/g	SW846 8280A
2,3,7,8-TCDF	ND	4.6	ng/g	SW846 8280A
Total TCDF	ND	4.6	ng/g	SW846 8280A
1,2,3,7,8-PeCDF	ND	6.7	ng/g	SW846 8280A
2,3,4,7,8-PeCDF	ND	3.8	ng/g	SW846 8280A
Total PeCDF	ND	6.7	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDF	ND	3.5	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDF	ND	3.4	ng/g	SW846 8280A
2,3,4,6,7,8-HxCDF	ND	3.3	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDF	ND	5.1	ng/g	SW846 8280A
Total HxCDF	ND	5.5	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDF	ND	3.7	ng/g	SW846 8280A
1,2,3,4,7,8,9-HpCDF	ND	6.2	ng/g	SW846 8280A
Total HpCDF	ND	8.9	ng/g	SW846 8280A
OCDF	ND	7.6	ng/g	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	80	(25 - 150)
13C-2,3,7,8-TCDF	81	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	75	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	75	(25 - 150)
13C-OCDD	71	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	82	(25 - 150)

Hydrodec North America Inc.

Client Sample ID: D-3-FE-COMP

Trace Level Organic Compounds

Lot-Sample #...: A9K020442-008 **Work Order #...:** LNN011AA **Matrix.....:** LO
Date Sampled...: 10/22/09 **Date Received..:** 10/28/09
Prep Date.....: 11/18/09 **Analysis Date..:** 11/21/09
Prep Batch #...: 9316226
Dilution Factor: 1
% Moisture.....:

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	5.9	ng/g	SW846 8280A
Total TCDD	ND	35	ng/g	SW846 8280A
1,2,3,7,8-PeCDD	ND	15	ng/g	SW846 8280A
Total PeCDD	ND	20	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDD	ND	17	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDD	ND	16	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDD	ND	12	ng/g	SW846 8280A
Total HxCDD	ND	22	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDD	ND	18	ng/g	SW846 8280A
Total HpCDD	ND	20	ng/g	SW846 8280A
OCDD	ND	11	ng/g	SW846 8280A
2,3,7,8-TCDF	ND	4.4	ng/g	SW846 8280A
Total TCDF	ND	6.1	ng/g	SW846 8280A
1,2,3,7,8-PeCDF	ND	5.8	ng/g	SW846 8280A
2,3,4,7,8-PeCDF	ND	6.5	ng/g	SW846 8280A
Total PeCDF	ND	9.8	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDF	ND	9.9	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDF	ND	11	ng/g	SW846 8280A
2,3,4,6,7,8-HxCDF	ND	8.3	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDF	ND	8.3	ng/g	SW846 8280A
Total HxCDF	ND	13	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDF	ND	12	ng/g	SW846 8280A
1,2,3,4,7,8,9-HpCDF	ND	15	ng/g	SW846 8280A
Total HpCDF	ND	16	ng/g	SW846 8280A
OCDF	ND	17	ng/g	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	68	(25 - 150)
13C-2,3,7,8-TCDF	70	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	71	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	67	(25 - 150)
13C-OCDD	66	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	68	(25 - 150)

Hydrodec North America Inc.

Client Sample ID: D-4-CO-COMP

Trace Level Organic Compounds

Lot-Sample #...: A9K020442-009 **Work Order #...:** LNN021AA **Matrix.....:** LO
Date Sampled...: 10/23/09 **Date Received..:** 10/28/09
Prep Date.....: 11/18/09 **Analysis Date..:** 11/21/09
Prep Batch #...: 9316226
Dilution Factor: 1
% Moisture.....:

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	4.1	ng/g	SW846 8280A
Total TCDD	ND	37	ng/g	SW846 8280A
1,2,3,7,8-PeCDD	ND	4.2	ng/g	SW846 8280A
Total PeCDD	ND	7.9	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDD	ND	4.8	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDD	ND	5.0	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDD	ND	5.4	ng/g	SW846 8280A
Total HxCDD	ND	9.6	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDD	ND	5.4	ng/g	SW846 8280A
Total HpCDD	ND	8.8	ng/g	SW846 8280A
OCDD	ND	5.1	ng/g	SW846 8280A
2,3,7,8-TCDF	ND	3.7	ng/g	SW846 8280A
Total TCDF	ND	4.6	ng/g	SW846 8280A
1,2,3,7,8-PeCDF	ND	3.7	ng/g	SW846 8280A
2,3,4,7,8-PeCDF	ND	3.2	ng/g	SW846 8280A
Total PeCDF	ND	6.7	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDF	ND	2.1	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDF	ND	2.1	ng/g	SW846 8280A
2,3,4,6,7,8-HxCDF	ND	3.5	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDF	ND	2.7	ng/g	SW846 8280A
Total HxCDF	ND	4.1	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDF	ND	3.3	ng/g	SW846 8280A
1,2,3,4,7,8,9-HpCDF	ND	4.5	ng/g	SW846 8280A
Total HpCDF	ND	5.8	ng/g	SW846 8280A
OCDF	ND	5.4	ng/g	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	80	(25 - 150)
13C-2,3,7,8-TCDF	82	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	77	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	81	(25 - 150)
13C-OCDD	77	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	80	(25 - 150)

Hydrodec North America Inc.

Client Sample ID: D-4-FE-COMP

Trace Level Organic Compounds

Lot-Sample #...: A9K020442-010 **Work Order #...:** LNN031AA **Matrix.....:** LO
Date Sampled...: 10/23/09 **Date Received..:** 10/28/09
Prep Date.....: 11/18/09 **Analysis Date..:** 11/21/09
Prep Batch #...: 9316226
Dilution Factor: 1
% Moisture.....:

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	5.5	ng/g	SW846 8280A
Total TCDD	ND	34	ng/g	SW846 8280A
1,2,3,7,8-PeCDD	ND	7.5	ng/g	SW846 8280A
Total PeCDD	ND	11	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDD	ND	9.5	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDD	ND	9.6	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDD	ND	8.1	ng/g	SW846 8280A
Total HxCDD	ND	12	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDD	ND	13	ng/g	SW846 8280A
Total HpCDD	ND	14	ng/g	SW846 8280A
OCDD	ND	6.4	ng/g	SW846 8280A
2,3,7,8-TCDF	ND	2.5	ng/g	SW846 8280A
Total TCDF	ND	4.6	ng/g	SW846 8280A
1,2,3,7,8-PeCDF	ND	3.5	ng/g	SW846 8280A
2,3,4,7,8-PeCDF	ND	5.2	ng/g	SW846 8280A
Total PeCDF	ND	6.7	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDF	ND	9.1	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDF	ND	10	ng/g	SW846 8280A
2,3,4,6,7,8-HxCDF	ND	3.3	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDF	ND	4.2	ng/g	SW846 8280A
Total HxCDF	ND	12	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDF	ND	8.6	ng/g	SW846 8280A
1,2,3,4,7,8,9-HpCDF	ND	6.1	ng/g	SW846 8280A
Total HpCDF	ND	11	ng/g	SW846 8280A
OCDF	ND	10	ng/g	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	71	(25 - 150)
13C-2,3,7,8-TCDF	73	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	71	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	73	(25 - 150)
13C-OCDD	71	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	73	(25 - 150)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

QUALITY CONTROL SECTION

METHOD BLANK REPORT

Trace Level Organic Compounds

Client Lot #...: A9K020442 **Work Order #...:** LPA8V1AA **Matrix.....:** WASTE
MB Lot-Sample #: G9K120000-226

Prep Date.....: 11/18/09
Analysis Date..: 11/21/09 **Prep Batch #...:** 9316226
Dilution Factor: 1

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	3.2	ng/g	SW846 8280A
Total TCDD	ND	38	ng/g	SW846 8280A
1,2,3,7,8-PeCDD	ND	9.2	ng/g	SW846 8280A
Total PeCDD	ND	12	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDD	ND	11	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDD	ND	11	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDD	ND	10	ng/g	SW846 8280A
Total HxCDD	ND	16	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDD	ND	13	ng/g	SW846 8280A
Total HpCDD	ND	33	ng/g	SW846 8280A
OCDD	ND	9.2	ng/g	SW846 8280A
2,3,7,8-TCDF	ND	3.3	ng/g	SW846 8280A
Total TCDF	ND	7.1	ng/g	SW846 8280A
1,2,3,7,8-PeCDF	ND	4.9	ng/g	SW846 8280A
2,3,4,7,8-PeCDF	ND	4.8	ng/g	SW846 8280A
Total PeCDF	ND	8.5	ng/g	SW846 8280A
1,2,3,4,7,8-HxCDF	ND	6.8	ng/g	SW846 8280A
1,2,3,6,7,8-HxCDF	ND	6.1	ng/g	SW846 8280A
2,3,4,6,7,8-HxCDF	ND	8.5	ng/g	SW846 8280A
1,2,3,7,8,9-HxCDF	ND	6.0	ng/g	SW846 8280A
Total HxCDF	ND	11	ng/g	SW846 8280A
1,2,3,4,6,7,8-HpCDF	ND	7.0	ng/g	SW846 8280A
1,2,3,4,7,8,9-HpCDF	ND	9.4	ng/g	SW846 8280A
Total HpCDF	ND	11	ng/g	SW846 8280A
OCDF	ND	7.5	ng/g	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	66	(25 - 150)
13C-2,3,7,8-TCDF	63	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	68	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	79	(25 - 150)
13C-OCDD	75	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	61	(25 - 150)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

Trace Level Organic Compounds

Client Lot #...: A9K020442 Work Order #...: LPA8V1AC Matrix.....: WASTE
LCS Lot-Sample#: G9K120000-226
Prep Date.....: 11/18/09 Analysis Date..: 11/21/09
Prep Batch #...: 9316226
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
2,3,7,8-TCDD	**105**	**(50 - 150)**	**SW846 8280A**
1,2,3,7,8-PeCDD	**103**	**(50 - 150)**	**SW846 8280A**
1,2,3,4,7,8-HxCDD	**97**	**(50 - 150)**	**SW846 8280A**
1,2,3,6,7,8-HxCDD	**106**	**(50 - 150)**	**SW846 8280A**
1,2,3,7,8,9-HxCDD	**98**	**(50 - 150)**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDD	**101**	**(50 - 150)**	**SW846 8280A**
OCDD	**100**	**(50 - 150)**	**SW846 8280A**
2,3,7,8-TCDF	**99**	**(50 - 150)**	**SW846 8280A**
1,2,3,7,8-PeCDF	**109**	**(50 - 150)**	**SW846 8280A**
2,3,4,7,8-PeCDF	**107**	**(50 - 150)**	**SW846 8280A**
1,2,3,4,7,8-HxCDF	**103**	**(50 - 150)**	**SW846 8280A**
1,2,3,6,7,8-HxCDF	**101**	**(50 - 150)**	**SW846 8280A**
2,3,4,6,7,8-HxCDF	**98**	**(50 - 150)**	**SW846 8280A**
1,2,3,7,8,9-HxCDF	**106**	**(50 - 150)**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDF	**103**	**(50 - 150)**	**SW846 8280A**
1,2,3,4,7,8,9-HpCDF	**104**	**(50 - 150)**	**SW846 8280A**
OCDF	**104**	**(50 - 150)**	**SW846 8280A**

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	71	(25 - 150)
13C-2,3,7,8-TCDF	68	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	78	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	76	(25 - 150)
13C-OCDD	79	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	69	(25 - 150)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Chain of Custody

Hydrodec North America, LLC
2021 Steinway Blvd. SE
Canton, OH 44707
PH (330) 454-8202
Fax (330) 454-8870

Company		Test America	
Facility Name		Hydrodec North America	
City	Canton	State	Ohio
Project Name	PCB Trial		
Contact	Joe DeVirgilio	Telephone#	330-454-8202
Client Rep.		Project Mana	Brian Klink

Item #	Sample # or Location	Date	Time	Sample Type	Sample Description	Sets or #'s of Containers	Dioxins/Furans	PCB		PCB Wipe Test	Other Analysis	Remarks
1	D-1-CO-CompR	10/20/2009		Glass	Clean Oil	2	X	X				
2	D-1-CO-Comp	10/20/2009		Plastic	Clean Oil	2	X	X				
3	D-1-FE-Comp	10/20/2009		Plastic	Feed Oil	1	X	X				
4	D-2-CO-CompR	10/22/2009		Glass	Clean Oil	2	X	X				
5	D-2-CO-Comp	10/21/2009		Plastic	Clean Oil	2	X	X				
6	D-2-FE-Comp	10/21/2009		Plastic	Feed Oil	2	X	X				
7	D-3-CO-Comp	10/22/2009		Glass	Clean Oil	3	X	X				
8	D-3-FE-Comp	10/22/2009		Glass	Feed Oil	2	X	X				
9	D-4-CO-Comp	10/23/2009		Glass	Clean Oil	2	X	X				
10	D-4-FE-Comp	10/23/2009		Glass	Feed Oil	2	X	X				
11	Trip Blank	10/23/2009		Glass	Blank	1				X		
12	C001B	10/23/2009		Glass	Clean Oil	1		X				
13												
14												
15	Total Number of Samples					22						

Relinquished By	Accepted By	Date	Time
[signature]		10/28	10 o'clock
	[signature]	10/28/09	1000

Remarks: Please provide one duplicate of any sample Item # 1-10

Temperature

Samplers Signature [signature]

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** A9J280262 11/2/09
North Canton Facility A9K020442

Client Hydrodec Project PCB TRIAL By: (Signature)
Cooler Received on 10/28/09 Opened on 10/28/09
FedEx ☐ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other
TestAmerica Cooler # 4561 Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
   If YES, Quantity Quantity Unsalvageable
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☒
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions?
2. Shippers' packing slip attached to the cooler(s)? Yes ☐ No ☒
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other
6. Cooler temperature upon receipt °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☒
10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☐ No ☒ Were VOAs on the COC? Yes ☐ No ☒

Contacted PM Date by via Verbal ☐ Voice Mail ☐ Other ☐
Concerning

14. CHAIN OF CUSTODY

The following discrepancies occurred:
Received samples D-1-CO-Comp, D-1-FE-Comp, D-2-CO-Comp & D-2-FE-Comp in plastic containers. It is preferred that PCBs be in glass containers.

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot# 031909-HNO_3; Sulfuric Acid Lot# 100108-H_2SO_4; Sodium Hydroxide Lot# 100108 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 050205-$(CH_3COO)_2ZN$/NaOH.* What time was preservative added to sample(s)?

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

Appendix H

Modifications

Hydrodec North America, LLC

2021 Steinway Blvd SE
Canton, OH 44707
Web: www.hydrodec.com
PH (330) 454-8202
Fax (330) 454-8870

October 30, 2009

Mr. Matt Hale
Director - Office of Resource Conservation and Recovery
U.S. EPA - Mail Code 5301P
Potomac Yards North
2733 S. Crystal Drive
Rm # N-6331
Arlington, VA 22202

SUBJECT: Demonstration Test – Modifications
Hydrodec North America, LLC.

Dear Director Hale,

Prior to and during the Hydrodec demonstration test there were a number of project modifications. These were agreed to by Winston Lue and Molly Finn as well as Hydrodec. The modifications are described below:

1. Number of Runs/Samples - Hydrodec originally proposed three 8-hour test runs. Upon further discussion it was determined that Hydrodec would conduct four 6-hour tests. Sampling was then limited to those times when PCB oil was actually being processed.

2. Feedstock PCB Content – The PCB content of the feedstock being used for the test was anticipated to be <2,000 ppm. Preliminary results from samples taken during the demonstration indicate that some samples contained PCBs at levels exceeding 2,000 ppm.

3. Scavenger - Scavenger concentrations and feed rates were increased throughout the duration of the test. The final report will describe these modifications.

4. Re-samples - Due to potential sample cross-contamination, composite samples for Runs 1 and 2 were re-composited.

Hydrodec North America, LLC

Hydrodec looks forward to continued work on this project and ultimate approval. I can be contacted at 330-454-8202 (x102) if you have any questions or concerns.

Sincerely,

Brian D. Klink
General Manager
Hydrodec North America, LLC

X:/pcbpermitting/demo/pcbdemods1.doc

Appendix I

Process Data

Hydrodec PCB Demonstration Trial Process Data

RUN 1 - 10/20/09

Date	Time	Oil Feed Rate	Reactor Temperature	Reactor Pressure	Hydrogen Feed Rate	Scavenger Feed Rate	Quench Water Feed Rate
		kg/hr	deg C	Kpa	kg/hr	kg/hr	kg/hr
10/20/09	8:30:00	649.3	305.1	3611.5	22.5	6.47	84.09
10/20/09	8:40:00	649.3	305.1	3614.6	22.5	6.47	85.19
10/20/09	8:50:00	649.3	305.1	3604.3	22.5	6.47	84.25
10/20/09	9:00:00	664.3	305.1	3597.9	22.5	6.47	83.18
10/20/09	9:10:00	653.0	305.1	3602.3	22.5	6.47	81.92
10/20/09	9:20:00	649.9	306.1	3598.1	22.5	6.47	84.20
10/20/09	9:30:00	649.9	306.1	3599.1	22.5	6.47	85.47
10/20/09	9:40:00	649.9	306.1	3595.0	22.5	6.47	84.53
10/20/09	9:50:00	649.9	306.1	3593.9	22.0	6.47	83.68
10/20/09	10:00:00	649.9	305.1	3596.0	22.0	6.47	83.64
10/20/09	10:10:00	649.9	305.1	3598.0	22.0	6.47	86.08
10/20/09	10:20:00	649.9	305.1	3594.7	22.0	6.47	83.00
10/20/09	10:30:00	649.9	305.1	3603.9	22.0	6.47	81.81
10/20/09	10:40:00	649.8	305.1	3589.1	22.0	6.47	85.91
10/20/09	10:50:00	649.8	305.1	3577.6	22.0	6.47	83.42
10/20/09	11:00:00	649.8	305.1	3567.2	22.0	6.47	88.07
10/20/09	11:10:00	649.8	305.1	3550.6	22.0	5.37	82.70
10/20/09	11:20:00	649.8	305.1	3539.1	22.0	5.37	86.56
10/20/09	11:30:00	649.8	305.1	3511.6	22.5	5.82	85.53
10/20/09	11:40:00	649.6	305.1	3519.3	22.5	5.28	83.50
10/20/09	11:50:00	649.2	305.1	3513.0	22.5	6.28	86.72
10/20/09	12:00:00	649.4	305.1	3516.2	23.0	4.95	84.79
10/20/09	12:10:00	650.2	305.1	3507.7	23.0	3.91	82.98
10/20/09	12:20:00	650.2	305.1	3503.8	23.0	2.39	86.26
10/20/09	12:30:00	649.4	305.1	3509.9	23.5	3.91	85.16
10/20/09	12:40:00	649.9	305.1	3506.7	23.5	3.91	86.32
10/20/09	12:50:00	650.0	305.1	3507.9	23.5	3.91	86.55
10/20/09	13:00:00	650.0	305.1	3508.0	23.5	4.41	85.09
10/20/09	13:10:00	648.9	305.1	3507.9	24.0	4.41	86.08
10/20/09	13:20:00	648.9	305.1	3500.4	24.0	4.41	82.86
10/20/09	13:30:00	649.9	305.1	3503.4	24.0	4.41	85.09
10/20/09	13:40:00	649.2	305.1	3495.0	24.0	4.41	86.44
10/20/09	13:50:00	649.2	305.1	3490.6	24.0	4.41	87.83
10/20/09	14:00:00	649.2	305.1	3491.7	24.0	4.41	87.69
10/20/09	14:10:00	650.2	305.1	3488.7	24.0	4.41	87.70
10/20/09	14:20:00	650.2	305.1	3488.8	24.0	4.41	83.70
10/20/09	14:30:00	650.2	305.1	3485.6	24.0	4.91	85.23
Average		**650.2**	**305.2**	**3545.6**	**22.9**	**5.4**	**85.0**

Hydrodec PCB Demonstration Trial Process Data

RUN 2 - 10/21/09							
Date	Time	Oil Feed Rate	Reactor Temperature	Reactor Pressure	Hydrogen Feed Rate	Scavenger Feed Rate	Quench Water Feed Rate
		kg/hr	deg C	Kpa	kg/hr	kg/hr	kg/hr
10/21/09	8:30:00	650.7	305.1	3514.1	24.5	5.9	82.7
10/21/09	8:40:00	649.6	305.1	3511.1	24.5	5.9	84.0
10/21/09	8:50:00	673.2	305.1	3515.2	24.5	5.9	82.0
10/21/09	9:00:00	651.6	305.1	3510.0	24.5	5.9	86.4
10/21/09	9:10:00	650.6	305.1	3511.2	24.5	5.9	85.6
10/21/09	9:20:00	649.5	306.1	3514.2	24.5	5.9	81.3
10/21/09	9:30:00	649.5	306.1	3509.9	24.5	5.9	83.6
10/21/09	9:40:00	650.9	306.1	3516.1	24.5	5.9	85.8
10/21/09	9:50:00	648.9	305.1	3512.9	24.5	5.9	86.6
10/21/09	10:00:00	648.9	305.1	3513.9	24.5	5.9	85.3
10/21/09	10:10:00	649.9	304.1	3511.8	24.5	5.9	84.7
10/21/09	10:20:00	649.9	304.1	3512.8	24.5	5.9	84.6
10/21/09	10:30:00	649.9	304.1	3510.7	24.5	6.4	81.6
10/21/09	10:40:00	652.9	304.1	3512.7	24.5	6.4	83.5
10/21/09	10:50:00	650.2	304.1	3511.5	24.5	6.4	84.4
10/21/09	11:00:00	650.2	305.1	3513.6	24.5	6.4	85.4
10/21/09	11:10:00	650.2	305.1	3511.5	24.5	6.4	85.6
10/21/09	11:20:00	650.2	305.1	3509.4	24.5	6.4	83.6
10/21/09	11:30:00	650.2	305.1	3513.5	24.5	6.4	84.8
10/21/09	11:40:00	649.4	305.1	3510.4	24.5	6.4	84.7
10/21/09	11:50:00	606.4	305.1	3510.6	25.0	6.4	82.5
10/21/09	12:00:00	648.2	305.1	3499.8	25.5	0.7	84.6
10/21/09	12:10:00	1006.6	303.1	2994.3	0.6	0.2	5.0
10/21/09	12:20:00	505.0	291.8	1492.5	5.0	0.2	1.8
10/21/09	12:30:00	373.1	268.2	710.6	1.9	0.2	1.9
10/21/09	12:40:00	359.9	253.0	370.1	0.9	0.2	2.9
10/21/09	12:50:00	354.8	242.9	208.0	0.9	0.2	1.0
10/21/09	13:00:00	352.5	235.9	119.9	0.4	0.2	2.0
10/21/09	13:10:00	350.5	229.9	72.5	0.4	0.2	1.0
10/21/09	13:20:00	350.5	224.8	66.2	0.4	0.2	1.0
10/21/09	13:30:00	348.5	219.8	83.4	47.3	0.2	1.0
10/21/09	13:40:00	139.4	221.8	90.5	49.2	0.2	1.0
10/21/09	13:50:00	0.5	234.0	86.5	49.7	0.2	1.0
10/21/09	14:00:00	0.5	235.0	51.2	9.7	0.2	1.0
10/21/09	14:10:00	0.5	232.0	54.2	8.9	0.2	1.0
10/21/09	14:20:00	0.5	231.0	60.3	5.9	0.2	1.0
10/21/09	14:30:00	0.5	231.0	45.6	14.2	0.2	1.0
Average		**498.0**	**280.1**	**2263.9**	**19.9**	**3.6**	**50.7**

Hydrodec PCB Demonstration Trial Process Data

RUN 3 - 10/22/09

Date	Time	Oil Feed Rate	Reactor Temperature	Reactor Pressure	Hydrogen Feed Rate	Scavenger Feed Rate	Quench Water Feed Rate
		kg/hr	deg C	Kpa	kg/hr	kg/hr	kg/hr
10/22/09	8:30:00	649.3	304.3	3520.3	24.0	6.9	89.4
10/22/09	8:40:00	650.4	305.3	3518.4	24.0	6.9	79.9
10/22/09	8:50:00	655.6	305.3	3525.9	23.5	6.9	81.2
10/22/09	9:00:00	650.1	305.3	3523.7	23.5	6.9	83.4
10/22/09	9:10:00	650.1	305.3	3522.3	23.5	6.9	82.5
10/22/09	9:20:00	649.3	305.3	3522.4	23.5	6.9	82.5
10/22/09	9:30:00	650.1	305.3	3520.3	23.5	6.9	82.4
10/22/09	9:40:00	650.4	305.3	3523.6	23.5	6.9	81.5
10/22/09	9:50:00	650.4	305.3	3526.9	23.5	6.9	81.3
10/22/09	10:00:00	649.4	305.3	3523.5	23.5	6.9	83.2
10/22/09	10:10:00	650.1	305.3	3525.0	23.5	6.9	81.4
10/22/09	10:20:00	650.4	305.3	3528.2	23.5	6.9	82.6
10/22/09	10:30:00	650.1	305.3	3525.1	23.5	6.9	82.4
10/22/09	10:40:00	649.2	305.3	3524.0	23.5	6.9	81.2
10/22/09	10:50:00	650.0	305.3	3525.3	23.5	6.9	82.2
10/22/09	11:00:00	650.0	305.3	3526.3	23.5	6.9	83.4
10/22/09	11:10:00	650.0	305.3	3521.5	23.5	6.9	82.7
10/22/09	11:20:00	650.0	305.3	3525.8	23.5	6.9	82.7
10/22/09	11:30:00	650.0	305.3	3525.6	23.5	6.9	80.3
10/22/09	11:40:00	645.9	305.3	3523.9	23.5	6.9	82.5
10/22/09	11:50:00	648.4	305.3	3524.6	23.5	7.4	81.2
10/22/09	12:00:00	649.4	305.3	3528.0	23.5	7.4	81.7
10/22/09	12:10:00	649.4	305.3	3523.6	23.5	7.4	82.8
10/22/09	12:20:00	649.4	305.3	3525.7	23.5	7.4	82.7
10/22/09	12:30:00	649.4	305.3	3522.7	23.5	7.4	83.5
10/22/09	12:40:00	649.4	305.3	3524.0	23.5	7.4	83.5
10/22/09	12:50:00	649.4	305.3	3527.0	23.5	7.4	84.4
10/22/09	13:00:00	650.1	305.3	3525.0	23.5	7.4	83.2
10/22/09	13:10:00	650.1	305.3	3524.5	23.5	7.4	83.2
10/22/09	13:20:00	650.0	305.3	3525.7	24.0	7.4	83.2
10/22/09	13:30:00	649.9	305.3	3525.9	23.5	7.4	83.1
10/22/09	13:40:00	649.8	305.3	3523.2	23.4	7.4	83.1
10/22/09	13:50:00	652.3	305.3	3523.3	23.9	7.4	83.1
10/22/09	14:00:00	649.5	305.3	3523.6	23.4	7.4	82.2
10/22/09	14:10:00	649.5	305.3	3523.9	23.4	7.4	82.2
10/22/09	14:20:00	649.5	305.3	3524.9	23.9	7.4	82.3
10/22/09	14:30:00	649.6	305.3	3522.9	23.9	7.4	80.4
Average		**649.9**	**305.3**	**3524.2**	**23.6**	**7.1**	**82.6**

Hydrodec PCB Demonstration Trial Process Data

RUN 4 - 10/23/09

Date	Time	Oil Feed Rate	Reactor Temperature	Reactor Pressure	Hydrogen Feed Rate	Scavenger Feed Rate	Quench Water Feed Rate
		kg/hr	deg C	Kpa	kg/hr	kg/hr	kg/hr
10/23/09	8:30:00	649.3	305.1	3514.9	24.3	7.4	81.3
10/23/09	8:40:00	649.3	305.1	3512.6	24.3	7.4	85.4
10/23/09	8:50:00	650.3	305.1	3513.9	24.3	7.4	81.3
10/23/09	9:00:00	650.2	305.1	3512.9	24.3	7.4	84.6
10/23/09	9:10:00	665.6	305.1	3513.9	24.3	7.4	80.5
10/23/09	9:20:00	652.1	305.1	3512.7	24.3	7.4	83.7
10/23/09	9:30:00	649.8	305.1	3511.6	24.3	7.4	83.6
10/23/09	9:40:00	649.8	305.1	3511.0	24.3	7.4	83.5
10/23/09	9:50:00	649.8	305.1	3513.3	24.3	7.4	83.7
10/23/09	10:00:00	649.8	305.1	3511.5	24.3	7.4	81.6
10/23/09	10:10:00	649.9	305.1	3513.8	24.3	7.4	85.0
10/23/09	10:20:00	649.9	305.1	3511.4	24.3	7.4	82.0
10/23/09	10:30:00	649.9	305.1	3510.3	24.3	7.4	81.8
10/23/09	10:40:00	649.9	305.1	3513.4	24.3	7.4	81.9
10/23/09	10:50:00	650.1	305.1	3511.5	24.3	7.4	82.8
10/23/09	11:00:00	650.1	305.1	3511.5	24.3	7.4	85.1
10/23/09	11:10:00	650.1	305.1	3512.7	24.3	7.4	84.2
10/23/09	11:20:00	650.1	305.1	3511.8	24.3	7.4	85.4
10/23/09	11:30:00	650.1	305.1	3510.8	24.3	7.4	80.0
10/23/09	11:40:00	651.2	305.1	3511.8	24.3	7.4	85.2
10/23/09	11:50:00	650.0	305.1	3510.0	24.3	7.4	83.0
10/23/09	12:00:00	650.0	305.1	3513.1	24.3	7.4	83.8
10/23/09	12:10:00	650.0	305.1	3510.2	24.3	7.4	81.7
10/23/09	12:20:00	650.0	305.1	3513.3	24.3	7.4	80.8
10/23/09	12:30:00	650.0	305.1	3511.4	24.3	7.4	80.8
10/23/09	12:40:00	650.0	305.1	3511.8	24.3	7.4	81.7
10/23/09	12:50:00	650.0	305.1	3512.2	24.3	7.4	82.6
10/23/09	13:00:00	650.0	305.1	3513.0	24.3	7.4	83.4
10/23/09	13:10:00	650.0	305.1	3512.2	24.3	7.4	85.6
10/23/09	13:20:00	650.0	305.1	3510.6	24.3	7.4	83.4
10/23/09	13:30:00	650.0	305.1	3508.5	24.3	7.4	81.6
10/23/09	13:40:00	650.0	305.1	3510.6	24.3	7.4	82.6
10/23/09	13:50:00	654.1	305.1	3510.4	24.3	7.4	83.7
10/23/09	14:00:00	649.4	305.1	3510.6	24.3	7.4	82.6
10/23/09	14:10:00	649.4	305.1	3510.7	24.3	7.4	80.8
10/23/09	14:20:00	649.4	305.1	3509.6	24.3	7.4	83.7
10/23/09	14:30:00	650.4	305.1	3510.6	24.3	7.4	81.5
Average		**650.5**	**305.1**	**3511.8**	**24.3**	**7.4**	**82.9**

Appendix J

Waste Manifests

29401

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-003

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ALD983167891	1	800 424-9300	004578372 JJK

GENERATOR

5. Generator's Name and Mailing Address
TCI OF ALABAMA, LLC
101 PARKWAY EAST
PELL CITY , AL 35125-2749
(205) 338-9997 Ext
Cnt. Greg Maggaro
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: TCI OF ALABAMA, LLC. — U.S. EPA ID Number: ALD983167891

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
HYDRODEC NORTH AMERICA, INC
2021 STEINWAY BLVD SE
CANTON , OH 44707
(330) 409-5606
Facility's Phone:

U.S. EPA ID Number: OHR000143263

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. RQ, POLYCHLORINATED BIPHENYLS, LIQUID,9,UN2315 PGIII	1	DM	72	KG	
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
DRUM OF PCB FLUID >499 PPM PCBS
ID: DRUM01
TRAILER:
PROFILE: N/A
DRFS: 10/14/09 POUNDS: 158
WORK ORDER: N/A GALS: 10
EMERGENCY RESPONSE GUIDE: #171
24 HR EMERGENCY CONTACT: CHEMTREC

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Isaac Helms — Signature: [signature] — Month 10 Day 15 Year 09

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Chris Burghy — Signature: Chris Burghy — Month 10 Day 15 Year 09

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Robert Morrison — Signature: Robert Morrison — Month 10 Day 15 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED

Hydrodec North America, LLC
2021 Steinway Boulevard,
Canton, Ohio 44707
Phone: (330) 454-8202
Fax : (330) 454-8870
www.hydrodec.com
EPA ID: OHR000143263

Certificate of Destruction

To: **TCI of Alabama, LLC**
101 Parkway East
Pell City, AL. 35125

This is to certify that used transformer oil, as described below, was treated by Hydrodec North America, LLC at;

2021 Steinway Boulevard, Canton Ohio

Delivery date of waste: October 15, 2009

Manifest Reference Number: PCB Fluid

Description of Materials: 004578372 JJK

Initial PCB level was: 650,000 mg/kg

Final PCB level was: ND mg/kg

Company Name	*Description of Material*
TCI of Alabama	Archolor 1260
Gallons Treated	*Date of Treatment*
10 Gallons	October 23, 2009

Certified by:
Hydrodec North America LLC

Joseph DeVirgilio, EHS Coordinator

Under Civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

6144

REC'D JAN 04 2010

NON-HAZARDOUS WASTE MANIFEST

D52642796

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. OHR000143263

Manifest Document No. 42796

2. Page 1 of 200

3. Generator's Name and Mailing Address
Hydrodec North America
2021 Steinway Blvd. SE
Canton OH 44707
(330) 280-3224 ATTN: Joe DeVirgilio

Site Address : SAME

4. Generator's Site

5. Transporter 1 Company Name Clean Harbors Environmental Services Inc

6. US EPA ID Number MAD039322250

A. State Transporter's ID

B. Transporter 1 Phone (781) 792-5000

7. Transporter 2 Company Name Clean Harbors Environmental Services

8. US EPA ID Number MAD039322250

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
Clean Harbors Chattanooga LLC
3300 Cummings Road
Chattanooga, TN 37419

10. US EPA ID Number TND982141392

E. State Facility's ID

F. Facility's Phone (423) 821-6926

11. WASTE DESCRIPTION	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a. NONE, NON-REGULATED SOLID, N/A	2	ΔM	200	P
b. NONE, NON-REGULATED SOLID, N/A	5	CF	1500	P
c. NONE, NON D.O.T. REGULATED, (BAUXITE PELLETS), N/A	10	ΔM	5000	P
d.				

G. Additional Descriptions for Materials Listed Above
11a.CH328719I 2 NSS
11b.CH328719I 5 FBIN
11c.CH411033 10 NSS

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Emergency Phone Number : (800) 483-3718

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: Joseph DeVirgilio Signature: [signature] Date: Month 12 Day 14 Year 09

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Dorin Beleaua Signature: [signature] Date: Month 12 Day 14 Year 09

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Jon Hargrave Agent of Clean Signature: [signature] Date: Month 12 Day 19 Year 9

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.
Printed/Typed Name: Rod Churchwell Signature: [signature] Date: Month 12 Day 28 Year 09

NON-HAZARDOUS WASTE

REC'D FEB 22 2010

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	OHR000143263	1 of 4	(877) 818-0087	000353485 VES

GENERATOR

5. Generator's Name and Mailing Address
HYDRODEC NORTH AMERICA LLC
2021 STEINWAY BLVD, SE
CANTON, OH 44707
Generator's Phone: 330 454-8202

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
VEOLIA ES TECHNICAL SOLUTIONS
U.S. EPA ID Number
NJD080631369

RECEIVED 2-17-10 MB

7. Transporter 2 Company Name
HAZMAT ENVIRONMENTAL GROUP INC
U.S. EPA ID Number
NYD980769947

8. Designated Facility Name and Site Address
VEOLIA ES TECHNICAL SOLUTIONS
HIGHWAY 73
3.5 MILES W. OF TAYLOR'S BAYOU
PORT ARTHUR, TX 77640
Facility's Phone: 409 736-2821
U.S. EPA ID Number
TXD000838898

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN2315, POLYCHLORINATED BIPHENYLS, LIQUID, 9, II, RQ (POLYCHLORINATED BIPHENYLS)	003	DM	00546	K	PCB2		
							OUTS2191	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1) W:106762 A:PTAVES070 -|- ADDENDUM ATTACHED FOR ADDITIONAL TSCA INFORMATION invoice veolia north jackson ohio

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: x Joseph DeVirgilio
Signature: x
Month 01 Day 08 Year 10

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steve Storms
Signature: Steve Storms
Month 01 Day 08 Year 10

Transporter 2 Printed/Typed Name: Darrell FERGUSON
Signature: Darrell Ferguson
Month 01 Day 17 Year 10

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Kat Adkins
Signature: Kat Adkins
Month 02 Day 08 Year 10

PACKING SUMMARY

Generator Number: 566977
HYDRODEC NORTH AMERICA LLC
2021 STEINWAY BLVD, SE
CANTON, OH 44707
Attn: JOSEPH DEVIRIGILLO
EPA ID: OHR000143263

Manifest Number: 000353485VES
Field System ID: OA
Work Order Number: 1184347000
Date Shipped: 01/08/2010

Container#: OA-1184347000-001 Waste Area: Manifest Page/Line: 01 / 1

WIP: 106762 DisposalCode: PTAVES070 PHY State: L

Date Accumulated: 01/08/2010 Gen Drum ID:

Shipping Name: UN2315, POLYCHLORINATED BIPHENYLS, LIQUID, 9, II, RQ (POLYCHLORINATED BIPHENYLS)

No. of Commons: 03 Outer Container: 551A2-DM Inner Container:

Primary Waste Codes: PCB2 PCB Serial #: 11843470001 OOS Date: 01/08/2010

Total Cmns Wt: 546 SIC: 3999 Source: G09 Form: W219 System: H040 Cubic Ft.: 7.50

Individual Common Weights: 182, 182, 182 (KILOGRAMS)

Units	Container Size	Net Weight	Chemical Name	EPA/State Codes
1	55 GAL		PCB CONTAMINATED MINERAL OIL [5-10%] AQUEOUS BASED CITRUS CLEANER/RINSEATE [90-95%]	PCB2

Appendix K

QC Blind Sample Analysis

QC Blind Sample Test Summary

Sample Description	Sample ID	Hydrodec Lab Result
Aroclor 1260 in Transformer Oil Mix #1	1026-09-03.1	2 ppm
Aroclor 1260 in Transformer Oil Mix #2	1026-09-03.2	2,362 ppm

ERA

A Waters Company

November 9, 2009

Brian Klink
Hydrodec
2021 Steinway Blvd SE
Canton, OH 44707

Dear Brian:

Enclosed please find the set of single blind oil samples that were recently ordered for you by Mike Rectanus at Battelle. Please direct inquiries and report results to Winston Lue at U.S.EPA. ph: 703-305-1617. The ERA project number corresponding to these samples is 1026-09-03.

If you have any questions or if we may be of any further assistance, please do not hesitate to call me.

Sincerely,

Anthony J. Ciacco
Inorganic Chemist

Enclosures
ajc

6000 W. 54th Avenue ■ Arvada, CO 80002 ■ 800-372-0122 ■ fax (303) 421-0159 ■ www.eraqc.com

ERA

A Waters Company
6000 West 54th Ave., Arvada, CO 80002

Invoice #	562916
Customer #	B583157
Date	11/9/2009
Page	1 of 1

Packing Slip

Project #	10260903

Bill To:

Battelle Memorial Institute
505 King Ave
Columbus, OH, USA 43201

Accounts Payable

Ship To:

Hydrodec
2021 Steinway Blvd SE
Canton, OH, USA 44707

Brian Klink

Email Address: rectanusm@battelle.org

(614) 424-7552

Order Comments:

1128390

Cust Svc Rep	Payment Terms	Shipping Method	Purchase Order #	Order #
	CREDIT CARD	FEDEX ECON	V161870006521	1-3BZB09110909FE

QTY	CAT #	Product	Type	Lot #	Study #
1	093	Custom Organic Standard	CUSTOM	10260903 REQUEST	
1	093	Custom Organic Standard	CUSTOM	10260903 REQUEST	

REPORT ANY PROBLEMS WITHIN 5 DAYS

Please check all items in the shipment against the attached packing list **immediately** upon receipt. ERA will **immediately replace** any broken or incorrect items related to this shipmment that are **reported within 5 business days.**

CALL ERA CUSTOMER SERVICE AT 1-888-372-0122 TO REPORT ANY PROBLEMS WITH THIS SHIPMENT

All products Country of Origin: USA Unless otherwise specified.

562916

ERA, A Waters Company
Sample Identification and Chain of Custody Form

Ship to: Hydrodec 2021 Steinway Blvd SE Canton, OH 44707 **Phone:** **Fax:** **Attention:** Brian Klink	**Ship from:** ERA 6000 W.54th Avenue Arvada, CO 80002 **Phone:** 800-372-0122 or 303-431-8454 **Fax:** 303-421-0159 **Contact:** Tony Ciacco

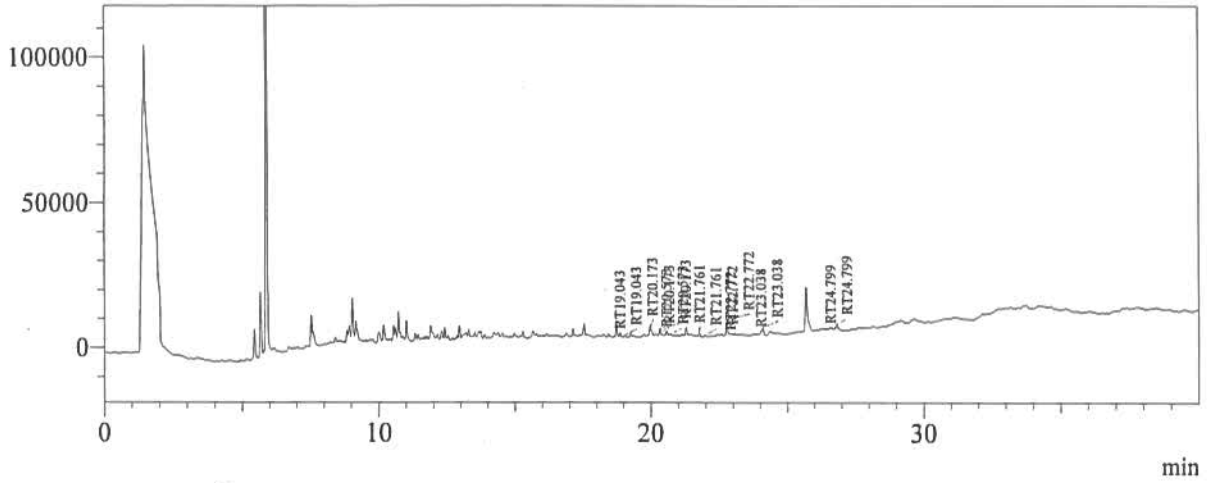
Sample Description	Sample Identification	Sample Date	Sample Type	# of Containers	Preservative
Aroclor 1260 in Transformer Oil Mix#1	1026-09-03.1	11/9/09	Oil	1 x 10 gr	None
Aroclor 1260 in Transformer Oil Mix#2	1026-09-03.2	11/9/09	Oil	1 x 10 gr	None
Please direct inquiries and report results to: Winston Lue at U.S. EPA ph: 703-305-1617					

		Condition of Contents
Relinquished by: Tony Ciacco	Date/Time: 11/9/09 16:00	
Received by:	Date/Time:	
Relinquished by:	Date/Time:	
Received by:	Date/Time:	
Relinquished by:	Date/Time:	
Received by:	Date/Time:	

Sample Information

Analysis Date & Time	: 1/8/2010 3:34:27 PM
User Name	: Admin
Vial#	: 21
Sample Name	: EPA MIX 1
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 100101-\EPA MIX 1 0(
Original Data Name	: C:\GCsolution\Data\Project1\EPA MIX 1 001.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\091221.gcb

gram EPA MIX 1 C:\Documents and Settings\Owner\Desktop\PAST DATA\PAST DATA 100101-\EPA MIX 1 001.gcd -
Intensity



Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.043	19.043	6820	2153	0.649	ppm
2	RT20.173	20.173	42960	7713	1.855	ppm
3	RT20.573	20.573	15314	2777	3.522	ppm
4	RT21.761	21.761	6366	1708	0.974	ppm
5	RT22.772	22.772	29001	6662	1.455	ppm
6	RT23.038	24.038	14184	3978	1.201	ppm
7	RT24.799	26.799	34207	3621	7.306	ppm

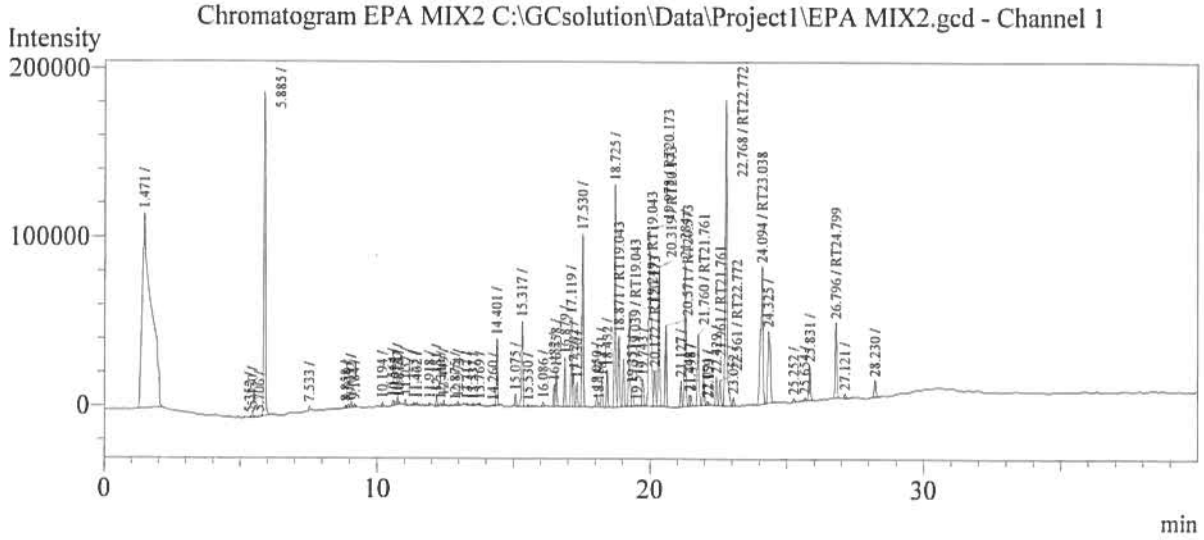
Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	1.504	ppm	114645
Total		1.504		

Sample Information

Analysis Date & Time	: 1/8/2010 5:23:11 PM
User Name	: Admin
Vial#	: 26
Sample Name	: EPA MIX2
Sample ID	:
Sample Type	: Unknown
Injection Volume	: 2.00
Multi Injection#	: 1
Dilution Factor	: 1
ISTD Amount	:
Sample Amount	: 1
Level#	: 1
Data Name	: C:\GCsolution\Data\Project1\EPA MIX2.gcd
Original Data Name	: C:\GCsolution\Data\Project1\EPA MIX2.gcd
Baseline Data Name	:
Method Name	: C:\GCsolution\Data\Project1\PCB1260.gcm
Report Name	: C:\GCsolution\System\DEFAULT.gcr
Batch Name	: C:\GCsolution\Data\Project1\091221.gcb

Chromatogram EPA MIX2 C:\GCsolution\Data\Project1\EPA MIX2.gcd - Channel 1



Quantitative Results - Channel 1

ID#	Name	Ret.Time	Area	Height	Conc.	Units
1	RT19.043	19.043	460918	126361	43.835	ppm
2	RT20.173	20.173	999206	209010	43.155	ppm
3	RT20.573	20.571	177030	48221	40.715	ppm
4	RT21.761	21.761	265017	65970	40.536	ppm
5	RT22.772	22.772	826023	196362	41.449	ppm
6	RT23.038	24.094	481478	81602	40.759	ppm
7	RT24.799	26.796	183143	44782	39.118	ppm

Group Results - Channel 1

Group#	Name	Conc.	Unit	Area
1	1260	42.108	ppm	3209672
Total		42.108		